Journal

of the

Royal Naval Medical Service.

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EDITED BY

SURGEON CAPTAIN H. L. BRIGGS, R.N.

AND

SURGEON CAPTAIN L. G. DANSON, R.N.

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Journal

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Editorial

The JOURNAL of the ROYAL NAVAL MEDICAL SERVICE [illegible] publication. [illegible] publishing [illegible] Number [illegible] features [illegible] others [illegible] retained the original [illegible] the enterprise during the past [illegible] years. [illegible] minds [illegible] discussed during these years [illegible] the idea has had [illegible] for the time being.

At the moment of writing the crisis being at its [illegible] and in the air. A [illegible] reasonably be expected [illegible] and simpler links with civilian institutions [illegible] and.

The Medical Branch has been raised to [illegible] personnel for the overmanning units [illegible] fleet and for [illegible] establishments ashore. [illegible] Retired List [illegible] the replaces [illegible] and [illegible] the [illegible] vices of the Royal Naval Volunteer Reserve who [illegible] standing [illegible] and organized [illegible] start.

With these [illegible] changes and experiments proceeding [illegible] must the fate of the JOURNAL be [illegible] Editors were themselves [illegible] supported by [illegible] them. New organizations have had [illegible] communication [illegible] have ceased to [illegible]

[illegible] rise as time goes on but with enterprises [illegible] continuity would be fatal. Therefore despite [illegible] situation it has been decided to carry on. More [illegible] considerable historical value in a crisis like the present [illegible] ship was lifted after the Great War there was a [illegible] and this not only among English Naval historians [illegible] tell. The latter demand continued until quite [illegible]

[illegible] the Royal Navy took over the Fleet Air Arm, [illegible] think Surgeon Commander Crowhurst Archer R.N.V.R. [illegible] Captain R.N. R.A.F. and Air Commodore Whittingham R.A.F. [illegible] contributions on Aviation Medicine [illegible] It is hoped to publish further authoritative [illegible] so that the new knowledge may be broad[illegible] the Medical Branch. Medicine, surgery [illegible] all been represented in our pages and it [illegible] contributions from the Dental Br[illegible] Notes and Cases has been well up to [illegible] has been opened. It is particularly [illegible] Medical Officers will support this por[illegible] duties permit them leisure to do [illegible] but should not continue too long [illegible] interesting material and experience will [illegible]

[illegible] their competent assistance and [illegible] News of the Service.

[illegible] of the needs of the Naval Medical [illegible] urge all our officers to become [illegible] This fund are its administration [illegible] and a superior understanding of the tragic [illegible] character of its transactions. Its [illegible] appeal [illegible] the least imaginative among us and [illegible] The balance sheet is published [illegible] of the sort of case in which its [illegible]

[illegible] the Journal through these critical days, [illegible] they can do their part in the adventure [illegible] monotony of scrapping life in wartime than [illegible] thoughts and experiences on paper. To [illegible] publication in the Journal should be the obvious and [illegible] matter.

Sir William Burnett K.C.B. K.C.H. M.D. F.R.S. F.R.C.P.
The First Medical Director General of the Royal Navy.

[illegible]

Articles.

SIR WILLIAM BURNETT K.C.B., K.C.H., M.D., F.R.S.

COMMUNICATED BY SURGEON LIEUTENANT-COMMANDER S. H. JENKINSON, R.N.

SIR WILLIAM BURNETT was born at Montrose in January 1779, and was educated at the Grammar School of that town. He served his apprenticeship with Dr. Hunter of Montrose, and studied for a short time at Edinburgh; but soon after his arrival in the northern capital he was induced to accept the appointment of Surgeon's Mate on board H.M.S. *Edgar*, of seventy-four guns, then at anchor with the North Sea Squadron in Leith Roads. He subsequently served in *Goliath* as Assistant Surgeon under Sir J. Jervis (later the Earl of St. Vincent), and was present at the action off St. Vincent, and at the Siege of Cadiz. He continued in the Navy, and was present at the battles of the Nile and Trafalgar, for which service he was created a K.C.B., and had four war medals presented to him.

For five years Dr. Burnett had charge of the hospitals for prisoners of war at Portsmouth and Fareham, where, from the extent of the duty and the nature of the disease, he necessarily encountered great fatigue both of body and mind, while he was daily exposed to the risk of contracting contagious fever, with cases of which the hospital was generally crowded, and from the effects of which his assistants as well as the nurses were constantly falling sick around him.

Still amidst these trying scenes his attention was not confined entirely to the practice of physic; for during the time he was Surgeon of the Hospital for Prisoners of War, he instituted a series of dissections, which were pursued assiduously both by himself and his assistants, and independently of other operations, which were of frequent occurrence, he amputated the arm at the shoulder joint five times—four times with the most perfect success.

How these laborious duties were considered to have been performed will be best understood by our stating that in 1810 they procured for him from Mr. Yorke, then First Lord of the Admiralty, the appointment of Physician and Inspector of Hospitals to the Mediterranean Fleet, which then consisted of more than 120 sail of all classes of vessels.

Towards the end of 1813 Dr. Burnett received official permission to return to England on account of impaired health. He arrived at Spithead on December 24, and at the beginning of March following, his health having improved, he was requested to take medical charge of the Russian Fleet in the Medway, then in a sickly state. He also undertook the superintendence of the department of prisoners of war at Chatham, amongst whom a

(Abstracted by permission from Munk's Roll of the Royal College of Physicians (1878).)

[illegible]

[illegible]

[illegible]

[illegible] ns of Dr Burnett [illegible] and he was fortunate [illegible] insulation [illegible] the nation [illegible] kness and [illegible] existing [illegible] establishment [illegible] In the Service Allow [illegible] pital from the medical [illegible] ected returns unsolicited [illegible] the examined the particular diseases of diseases [illegible] number of deaths from [illegible] This regulation has been of great advantage [illegible] medical systems pursued [illegible] under the Director General [illegible] statistical report [illegible]

[illegible] which [illegible] naval hospital [illegible] Sir William [illegible] urged the erection of the present [illegible] Hospital in lieu of the [illegible] which had long been practised [illegible] vessel [illegible] hospital ship at that port the [illegible] the old hospital were principally suggested by [illegible] the change proved [illegible] His personal visitations [illegible] other naval hospitals [illegible] produced great benefit in the adoption [illegible] suggested by him for their better and more perfect [illegible] management Nor is it one of the least [illegible] for which credit is due to [illegible] the moral and mental management of the naval lunatics [illegible] established chiefly in its execution and changing into comfortable [illegible] the former misery of those unfortunates This change was effected [illegible] the personal care of Dr Anderson who was selected by the Director General [illegible] on account of his superior [illegible] practical knowledge [illegible] kindness of heart and to whom the Service is so much indebted [illegible] the present admirable state of the asylum

All the reforms [illegible] in the Naval Medical Service either in hospitals or ships or [illegible] the established Sick Quarters and Marine Infirmaries were [illegible] by Sir William with evident advantage to the Service [illegible] facility and correctness with which in comparison with its former difficulties and irregularities the whole business of the Medical Department has for many years been conducted and with these regulations may also be connected those which have been formed and issued for the qualification of candidates for admission into the Naval Medical Service by which it may be confidently asserted that a class of medical officers now exists in the Navy equal to any whether in this or any other country

In the year 1841 a circumstance occurred which strongly showed the regard and esteem entertained for Sir William by the Naval Medical Corps

A committee from that body met for the purpose of offering to the whole of their brother officers an opportunity of evincing their feelings by presenting to him a testimonial of the sense they had of the benefits he had rendered not only in that class of officers but to the Service generally. The opportunity was eagerly embraced and the measure carried out with the greatest rapidity although when it first came to his knowledge that the affair was proceeding he expressed his strong objection to it but the managers would not desist. It could not however be otherwise than gratifying to him to witness such a feeling and the more so as those officers who had retired from the Service were as strenuous in the cause as those who were actively employed. The result was that in a very short space of time Sir William was presented with his portrait in full length painted by Sir Martin Shee then president of the Royal Academy accompanied by a handsome service of plate.

Upon all occasions when opportunity offered Sir William evinced his anxiety and zeal for the respectability and prosperity of the Medical Department of the Navy and amongst the many instances which could be adduced in proof of the truth of this assertion it is considered only necessary to refer to the honest and manly evidence given respecting the medical officers of the Navy by Sir William before the Naval and Military Commission appointed by Her Majesty. No small portion of the success which has attended the prolonged struggle of the naval assistant surgeons for their proper position was owing to the continued support of their claims by Sir William Burnett.

Sir William soon after coming to London became a licentiate of the Royal College of Physicians and some years afterwards a Fellow of the College. He was also a Fellow of the Royal Society the Royal Colleges of Surgeons of Edinburgh and Dublin and of the Medico Chirurgical Society of St Petersburg. He was the author of several papers on different medical subjects in the periodical medical journals of a work on the Mediterranean Fever the Official Report of Fever in the *Bann* Sloop of War on the African Station and an Account of a Contagious Fever prevailing among the Prisoners of War at Chatham.

Sir William Burnett died on February 16 1861 at the advanced age of 82.

AN ACCOUNT OF A CONTAGIOUS FEVER (TYPHUS)

BY SIR WILLIAM BURNETT K C B

From the earliest periods of history fever has been the inevitable concomitant of war, and has not unfrequently proved a more destructive agent in thinning the ranks of the respective combatants than the sword itself. The campaigns of Napoleon crowded the hospitals of the Continent

with contagious fever which attained its climax at Walcheren during the disastrous retreat from the North. On my return to Portsmouth I was [illegible] as from witnessing the melancholy spectacle afforded by the [illegible] infectious fever as the attendant of military operation scenes [illegible] to the continental nations but happily known to us only by [illegible]

In this country however epidemic visitations of contagious [illegible] destructive character nor unfrequently rise in quick succession [illegible] intervals of exemption often without any assignable cause [illegible] every class of society to an extent which has conferred on it the [illegible] appellation of the Pandemic of the British Isles.

The analogy of a disease thus extensive in influence [illegible] result must at all times present an ample and interesting field [illegible] research whether it may engage our attention on the [illegible] which it assumes as the scourge of fleets and armies [illegible] animal of a portion of its virulence by the more [illegible] civil life. With the view of contributing to the investigation [illegible] and habitudes of this formidable disease and of the more [illegible] prophylaxis and rational mode of treatment I am desirous [illegible] the history of a fever which prevailed amongst the Dutch and [illegible] prisoners of war on board several of the prison ships in the Medway [illegible] winter of 1813 14 which it is my object to prove was generated [illegible] and adventitious causes in one of the ships from whence it was [illegible] to the other ships in succession and eventually diffused [illegible] the whole of them unquestionably by contagious agency.

With the intention of corroborating the facts and opinions [illegible] in this statement I shall append parallel instances of contagious fever originating in several of His Majesty's ships from the casual introduction [illegible] persons labouring under the disease or from communication with [illegible] in which it has prevailed.

The uninterrupted chain of evidence which the history of these [illegible] will be found to present places their essentially contagious property [illegible] conspicuous light and will probably be considered to be more than [illegible] cient to remove from every unprejudiced mind all reasonable grounds [illegible] disbelief of their infectious origin and nature.

It will be in the recollection of most persons that the winter of 1813 14 was one of unusual severity [illegible] frost having commenced about Christmas which was followed by heavy falls of snow with which the ground [illegible] deeply covered for many weeks afterwards.

Early in the month of February 1814 a report was made to the Transport Board (under which was then placed the Medical Department of the Navy and prisoners of war) by the late Mr Thomson then surgeon of the *Bahama*

[illegible] there [illegible] [illegible] [illegible]

[illegible] the reception of [illegible] cases from the *Bahama* [illegible] Mr [illegible] his journal that the *Fayn* [illegible] to recommend [illegible] the *Bahama* [illegible] health [illegible] to present an communication [illegible] the hospital [illegible] Aphis malis appearance [illegible] and [illegible] The [illegible] appeared [illegible] the *Fayn* [illegible] cases of the *Bahama*.

[illegible] from the Madras [illegible] on December [illegible] 1861 [illegible] appeared by Mr [illegible] medical Dr Dickson [illegible] [illegible] Alexander Cockburn [illegible] the Yorkshire [illegible] On taking up [illegible] the [illegible] screen [illegible] Dr [illegible] [illegible] *Bahama* [illegible] *Dr*.

[illegible] Mr [illegible] [illegible] [illegible] *Fayn* [illegible] [illegible] Mr [illegible] that there [illegible] 187[illegible] [illegible] died the [illegible].

I found [illegible] Dr Dickson [illegible] great [illegible] happy [illegible] able zeal [illegible] hospital [illegible] 1[illegible] [illegible] the danger [illegible] with [illegible] the [illegible] the disease [illegible].

The *Bahama* [illegible] *Dr* [illegible] fever [illegible] the surgeon [illegible] gentleman [illegible] to be [illegible] Mr [illegible] *Defiance* [illegible] attack of the [illegible] From the *Bahama* [illegible] *Dr* [illegible] of the [illegible] on board [illegible]

fever [illegible] dangerously ill. In the *Orpheus* [illegible] and six or three cases fifty [illegible] were in bed, and the greater part of them exceedingly ill. [illegible] also appeared in the *Leda* and *Kron Prinz*; but the disease never [illegible] to any alarming extent on board either of these ships, though [illegible] the embarrassment consequent on such an accumulation of [illegible] fever. The smallpox spread extensively in the latter ship. There were [illegible] cases of smallpox on March 6, the surgeon had vaccinated 100 [illegible]. In three were still about twenty who had passed through neither disease. While however disease prevailed so extensively amongst the Danes and Americans, it is remarkable that the French prisoners of war in the surrounding prison ships enjoyed the best possible state of health.

The severe weather which had been in some measure coeval with the new year still continued, in consequence of which ventilation in the infected ships was often imperfect, and it was not without great difficulty that any measure advised for their benefit could be carried into effect. By daily ministering them however, visiting the prison decks frequently, and immediately clearing such as were ill, we in length had the advantage of treating the fever part on their first being attacked, but with all our care we sometimes failed in this important object, for the disease made its approach in so insidious a manner, that the patient had sometimes been ill for several days before he considered he had anything more the matter with him than a common cold.

During the early part of the month of March the disease continued without abatement in the *Bahama* and *Defiance*, and though many recovered on board these ships, the number sent to hospital was very great. Towards the conclusion of the month the weather became milder, and the fever was not only less frequent in its attack, but likewise somewhat less violent in its symptoms, though there were still many severe cases, but no less than five of the persons employed about the sick were attacked in the last week of March. At this time however by an arrangement which I made we obtained much greater space for our sick, and for the prisoners generally, and the weather not improving, duly, the disease ceased gradually amongst them, though the men who were sent from the *Defiance* to the *Belliqueux* continued to afford us occasionally fresh cases.

During the progress of the disease every medical officer employed (except I believe one assistant surgeon and myself) suffered an attack of the fever, and one died. Many of the ships' company and marines of the sickly ships were at different times attacked, but these being sent to the *Sussex* hospital ship at Sheerness, I had not an opportunity of personally ascertaining the termination of their cases, though I believe the deaths were not numerous.

The [illegible] prisoners of war taken ill after March 6 [illegible] [illegible] the exposure [illegible]

The fevers made its appearance with a surprising variety of symptoms [illegible] in [illegible] two being attacked alike. In general the patient on first feeling unhinged complained of great languor, lassitude, and much dejection of spirits, universal weariness and soreness of the whole body, or great prostration of strength, with pain in the back and thirst. In some the attack was preceded for several days by a sense of chilliness alone, but in most it was cold chills, shiverings, and in many instances severe rigors, succeeded. In general the countenance was pale, anxious, and depressed, but immediately when reaction took place it became flushed. The eyes in most of the patients presented a suffused dull, muddy, drunken-like appearance difficult to be described, but in others they were slightly yellow, glossy, or a little inflamed, with impatience of light. In those cases where rigors or shiverings were very prominent symptoms, headache, sometimes full, hard, as it was general and severe, and continued more or less through the whole disease; in others the pain was confined to the forehead; but in a considerable number of cases the affection of the head was not complained of after the first four or five days.

In a few cases the patients did not acknowledge having any pain in the head, but in others vertigo was frequent, and in some a tremor in the extremities of the head was observed. There were also a few cases wherein delirium and wandering, showing a considerable affection of the sensorium, appeared at an early period, accompanied by throbbing of the temporal arteries, and hæmorrhage and deafness. The state of the pulse was very [illegible] in some it was full only, in others quick and full—quick and irregular—quick and hard—hard and slow—full and slow—soft and languid, and in [illegible] in several cases the pulse was perfectly natural at the commencement. But this condition of the pulse did not remain through the whole progress of the disease.

Simultaneous with head-ache, general pains were complained of, and [illegible] suffered much from pains in the bones and joints. In one case burning pains in the lower extremities were mentioned, and in several instances the patients suffered from pains in the lower extremities alone, without head-ache. Many had pains in the chest with cough, and a troublesome expectoration of mucus; others complained of cyanche tonsillaris, accompanied by inflammation of the mucous membrane of the throat, pinching, hoarseness, and towards the middle of April the two last symptoms became very frequent.

The tongue was for the most part white and furred, but in several instances it was only slightly so at the beginning.

[illegible] generally preceded with loss of appetite [illegible] manned gait for a few days, or was free [illegible]

[illegible] constipated, though in a few instances [illegible] In the course of the disease several [illegible] hiccoughing. [illegible] a large portion of heart [illegible] is generally observed to be [illegible] [illegible] are common with [illegible] the disease.

[illegible] common and distressing symptoms [illegible] pain gradually increased, but [illegible] the early [illegible] were [illegible] with pain in [illegible] the lower extremities [illegible]

[illegible] paralysis of motion exhibited in the first [illegible] the most [illegible] symptoms were [illegible]

[illegible] progress of the fever, and in some [illegible] by [illegible] hot in stature to 104°, but in general [illegible] the brand than feeling which has [illegible]

[illegible] dull than at the [illegible] skin was much affected [illegible] with [illegible] of consciousness, and the [illegible] was also increased in quickness [illegible] however sometimes small [illegible] and [illegible] compressible.

[illegible] of the parts of the skin in different places of the scalp were [illegible] and [illegible] by erysipelas, which was [illegible] the [illegible] pain in the chest. I only recollect [illegible] extremities were affected, which [illegible] healthy young man who [illegible]

[illegible] many became comatose or [illegible] instantly moaning, others [illegible] and [illegible] their feelings; many [illegible] restraint and constant [illegible]

[illegible] pain in the chest, the [illegible] daily pulse, which was often [illegible]

[illegible] proceeded became [illegible] it was glazed [illegible]

[illegible]

[illegible]

[illegible] which [illegible]

[illegible] remedies [illegible] with [illegible] by [illegible] the disease by [illegible] porter

It was [illegible] took place [illegible] first attack

Though [illegible]

blisters on the seat of organic disorder was the most effective means of combating this disease in its early stage and though in many cases attended with earlier and severe local affection of the brain or lungs it was found necessary to pursue this line of practice to a considerable extent and always with advantage still there were occasionally cases which required a more gentle employment of blood-letting and called for a moderate use of it with at an earlier period of the disease

There were other cases characterized by severe local pains suffusion of the conjunctiva great prostration of strength—little or no increase of heat of the skin—and a pulse either at first oppressed or differing little from the natural state In these the effects of mercury as a stalogogue joined with [illegible] blood-letting were tried but the benefit derived was not of such a [illegible] as to induce me to recommend the practice to be generally followed [illegible] further extension indeed in one or two instances wherein ptyalism [illegible] produced the most deleterious effects and out of upwards of [illegible] where this remedy the fever had uniformly been brought [illegible] before the mercury showed its specific effects on the salivary system [illegible] when joined with other medicines and likewise as a febrifuge [illegible] circumstances I have long placed great reliance on the use [illegible] in the treatment of continued fever but I am [illegible] from very extensive experience that the employment of this [illegible] medicine in such large doses as have been of late [illegible] for the cure of typhoid fevers of this country is a practice [illegible] dangerous I would not however be understood as con[illegible] merely the employment of mercury as a stalogogue in the cure of [illegible] I have seen cases in which it was undoubtedly very [illegible] I have no hesitation in repeating my decided conviction that [illegible] employed under the circumstances before mentioned as a purga[illegible] is generally worse than useless in continued fevers more [illegible] fully developed

[illegible] much advantage during the early stages [illegible] the decline full purging was seldom required nor [illegible] [illegible]

[illegible] but I do not know [illegible] they were attended with the smallest advantage I am [illegible] the foregoing opinion on this subject I shall offend [illegible] but I feel bound to declare (after as extensive [illegible] fever is this perhaps fallen to the lot of anyone) [illegible] when treating this disease derived benefit from [illegible] but on the contrary during the period the hospital for [illegible] Peritonitis was under my direction where I have often

[illegible] twenty and thirty men in a day and indeed sometimes ten in an hour. Labouring under contagious fever I uniformly found that whenever a patient had taken an emetic previously to his coming to the hospital the disease was much more protracted, infinitely more difficult of cure and consequently in general far more fatal.

In the stage of convalescence attention to the bowels and clothing a light diet were the only, a small allowance of wine or bottled porter instead of all fermentations, and I have no recollection of a relapse taking place except in one instance.

I have before mentioned the very general prevalence of erysipelas, in the treatment of which particular symptoms much benefit was derived from the use of a lotion composed of spirituous terebinth, sulphuric acid diluted with many times its bulk of water, indeed this lotion appeared to be almost as a specific, and though the face and head were more generally affected by erysipelatous inflammation than any other part, I never found its disappearance to occasion the smallest increase of the general disease. On the contrary the relief of this fugacious symptom generally proved the harbinger of a favourable termination.

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MEDICAL RESEARCH AND AVIATION[1]

By Air Commodore H. E. WHITTINGHAM, C.B.E., K.H.P., F.R.C.P., F.R.C.S., D.P.H., D.T.M.

[illegible] Medical Officer, Royal Air Force, Member of the Medical Research Council, Member of the Medical Research Committee, Director of Medical Research, Air Ministry.

In Great Britain the medical problems of flying were very energetically tackled during the latter part of the Great War and a few succeeding years (1917–21). In this connection the work of Bazett, Bailey, Boothby, Cushny, Dreyer, Head, Rivers, and especially that of Martin Flack, gained international recognition, and largely as a result of their research has the present physiological tests of efficiency collectively termed "Flight tests" been adopted for the selection of flying personnel in the Royal Air Force.

Since then researches in aviation medicine have been along two main lines: (1) Pre-selection of personnel for flying duties; (2) Maintenance of the physiological efficiency of flying personnel.

I.—Pre-selection of Personnel for Flying Duties.

Group Captain H. A. Treadgold in 1934 from a statistical study of the body build, together with the medical and flying histories of pilots, stated

[1] Abridged from a paper read on May 9, 1939, at the Tenth International Congress on Military Medicine held in Washington, D.C., U.S.A.

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

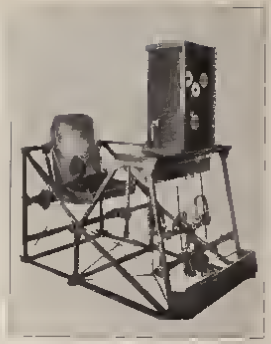


Fig. 1

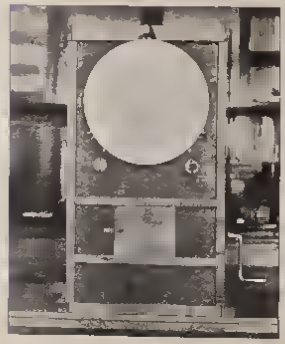


Fig. 2

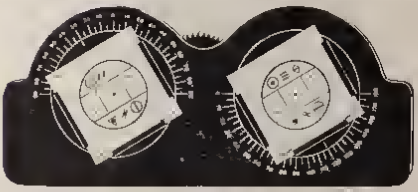
[illegible]

(c) *P. V.* [illegible] to learn [illegible] control [illegible] Capt. in H. [illegible] of Cambridge [illegible] by means [illegible] mental [illegible] of conduct [illegible] with is [illegible] interview [illegible] a sound [illegible]

(d) [illegible] Living [illegible] Chief [illegible] perception [illegible]

(e) *H. J.* [illegible] design [illegible] institution [illegible] ing, [illegible] with the [illegible] thrashed [illegible] to those [illegible] unity [illegible] they [illegible]

(f) *H.* [illegible] pin test [illegible] for the [illegible] difficult [illegible] [illegible] In addition [illegible]



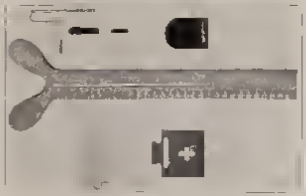


FIG. [illegible]

H. E. WHITTINGHAM: PHYSIOLOGICAL EXAMINATION OF FLYING PERSONNEL

In the advancement [illegible] the [illegible] flying [illegible] the [illegible] flying personnel [illegible] the [illegible] the [illegible] has the main [illegible] flying to [illegible] in the air [illegible] The high speed range at flight and the complexity of modern service aircraft have led to a great increase [illegible] and strain on the human element demanding a high degree of physical fitness of aircraft crews. For this reason special attention is paid during the initial medical examination to select those who are healthy and [illegible] with good muscle tone and quick reflexes and who have accurate vision and a good sense of balance. [illegible] enough the physiological efficiency of flying personnel—pilots observers

[illegible] [illegible] ophers and [illegible] [illegible] [illegible] [illegible] and [illegible] [illegible] [illegible] [illegible] [illegible] these [illegible] [illegible] [illegible] [illegible] the tongue [illegible] [illegible] mental and physical fatigue and an [illegible] [illegible] of the consolidation [illegible] [illegible] a few of these [illegible]

[illegible] 1944 Group Captain [illegible] C Clements investigated [illegible] with special [illegible] and was successful [illegible] his [illegible] eye training which is [illegible] players Clements and [illegible] the Air Ministry scientific research staff [illegible] as well as the lighting of cockpit [illegible] instrument panel so as to eliminate [illegible] In addition Livingston (1932) [illegible] also the effect [illegible] and as a result has developed [illegible] and spectacles which practically [illegible] when flying over cloud and water [illegible] full field of vision both in front and [illegible] binocular vision when landing

Black [illegible] pupils in the air by Wing Commander P C [illegible] and H W [illegible] also by Flight Lieutenant J B Wallace [illegible] and [illegible] (1938) and from a clinical aspect by Group Captain [illegible] postulates probably correctly that all parts of the [illegible] in the process depending on the force of [illegible] cause simple visual black out due [illegible] of the retina on the lower visual centres [illegible] and on the cortico visual area greater [illegible] but also emotional states or loss of power of [illegible] on the cerebral cortical area which represents [illegible] and initiates effector responses Following [illegible] Group Captain Martin Flack for trousers to keep the [illegible] various belts have been [illegible] help overcome splanchnic pooling during the application of [illegible] force Group Captain G S Marshall [illegible] suggested the [illegible] belt fitted with a spring loaded scoop to

---

[illegible] the [illegible] [illegible] October [illegible]

[illegible] upstream under pressure of high "g" and [illegible] Wallace (1938) designed a pneumatic belt to [illegible] various other belts with and without [illegible] normal on the abdomen and [illegible] Some of these helped to delay the onset of [illegible] but no satisfactory practical preventive [illegible] research in this subject is [illegible]

(b) *Noise.* [illegible] in the engine [illegible] and propeller and [illegible] aerodynamic [illegible] marked in the [illegible] in twin propeller [illegible]

With [illegible] of auditory [illegible] of pilots to prescribe [illegible] 110 to [illegible] phons and with D. [illegible] W. G. [illegible] 1939) of Manchester has been investigating [illegible] ways of [illegible] protection against excessive stimulation [illegible] right and unprotected ears in [illegible] engine [illegible] 2,200 r.p.m. and the engine and propeller [illegible] phons. Dickson has shown by analysis that [illegible] frequency sound (4,096 and 8,192 cycles per second) [illegible] the engine. Normal hearing [illegible] exposure of the [illegible] with persistent loss of high tones [illegible] in the region of 4,096 cycles per second. [illegible] Dickson has pointed out that although the pure [illegible] and engine noise is in the low and [illegible] between 100 to 200 cycles per second, [illegible] the higher level of the scale in the [illegible] no deafness [illegible] frequencies are involved. [illegible] flying helmet with earphone [illegible] impairment of auditory acuity [illegible]

In conclusion [illegible] work of Group Captain G. S. Marshall (19[illegible]) [illegible] scientific staff at the Royal Aircraft Establishment [illegible] in investigating the problems [illegible] low pressure chamber and his technical [illegible] oxygen mask and pressure suit now in use in [illegible]

REFERENCES

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] my experience [illegible] of the saphena vein [illegible] figure and [illegible] of gross recurrent [illegible] vein was merely [illegible] far returned with their varicose [illegible] in many others much degree [illegible]

When dealing with the [illegible] of the [illegible] saphena vein I have found it helpful [illegible] junction with the femoral vein [illegible] though it adds breadth [illegible] number of incisions which [illegible] and reduce the risk of recurrence [illegible] ing veins.

Indications for Operation.—With [illegible] which will be mentioned later, the operation is indicated [illegible] in which the valves in the saphena vein are incompetent. The [illegible] of the valve may be determined by either [illegible] use. The cough test is the easiest and most [illegible] It is our custom to try it first.

[illegible]

[illegible] expose [illegible] pronounced [illegible] definite [illegible] certain that the [illegible] to the expulsion [illegible]

In [illegible] [illegible] leg is [illegible] costus [illegible] upper end of the [illegible] pubic spine [illegible] When [illegible] falls much from [illegible] patient [illegible] is [illegible]

[illegible]

[illegible]

[illegible] Trendelenburg [illegible] the vessels will respond to efficient injection [illegible]

[illegible] indicated if there is recursion of the deep [illegible] difficulty in recognizing these cases. There is [illegible] suggestive of deep thrombosis such as a sudden [illegible] usually the left leg after typhoid fever or [illegible] there is persistent non-pitting œdema and the [illegible]

[illegible] of the patency of the deep veins may be determined [illegible] the thigh above the dilated veins [illegible] veins and then getting the patient to walk about. [illegible] If the varicose veins remain full [illegible] the superficial one. If the varicose veins remain full [illegible] then the enlargement is compensatory and any [illegible] injection or operation is strongly contra-indicated [illegible] pregnancy and pelvic tumours must be excluded.

(2) Operation [illegible] suitable in patients with marked arterial degeneration. [illegible] the presence of a normal pulsation in the dorsalis pedis artery [illegible] be determined in all patients.

Preparation.—It is important to instruct the ward staff to shave and prepare the skin [illegible] operation. The surgeon himself should [illegible] the patient [illegible] a few inches above the knee and if it [illegible] the upper opening. If the external saphena vein is involved [illegible] the highest dilated point. The marking should be [illegible] immediately before operation and the patient should be standing in [illegible] The mark may be made either with a needle scratch or with [illegible] been dipped in brilliant green or methylene blue.

Anæsthesia.—A preliminary injection of morph. sulph. gr. ¼ atrop. sulph. [illegible] hyoscine gr. [illegible] is given one hour before operation. In most [illegible] per cent. nitrous oxide gives a very satisfactory anæsthesia. [illegible] may be advisable if the patient is very nervous or [illegible] the same operation.

Operation.—(1) [illegible] in groin.—The incision is in the line of the groin [illegible] from the pubic spine and is

[illegible] pinching up the [illegible] edges and are lifted [illegible] one in the [illegible] which the surgeon [illegible] down to the deep [illegible] Any superficial vessel that [illegible] be divided between [illegible] The main saphena [illegible] on the deep fascia. If there [illegible] difficulty in finding it, [illegible] the thigh, the will pull the [illegible] vessel and make it more [illegible] feel. Another way of finding the [illegible] trace it up [illegible] superficial vessel, all of which [illegible]

The saphena [illegible] right up to the [illegible] with the femoral vein and [illegible] divided between [illegible] ligatures close to the main vein. [illegible] vein, and must be handled with the greatest care. [illegible] with forceps. A ligature is passed with an aneurysm needle [illegible] vein, and is tied as close as possible to its junction [illegible] Two artery forceps are now applied half an inch [illegible] and the vein is divided between them. The proximal stump [illegible] transfixed and tied between the ligature and the [illegible] which is then removed. The ligatures can be of No. 0 plain [illegible] No. 10 linen thread makes a safer and less bulky knot.

(2) Internal saphena [illegible] the knee. It is remarkable how difficult it can be to find the [illegible] unless it has been very carefully marked beforehand. An important [illegible] feature of the internal saphena vein is that it is on the inner side of the leg and thigh, but when it reaches the knee it passes [illegible] the [illegible] the inner condyle of the femur, and thus may be internal to it. The best hold for ligaturing it is about a hand's breadth above the condyle. A transverse incision is made over the vein, half an inch will be long enough in the [illegible] an inch to an inch and a half may be needed if there is much fatty subcutaneous tissue. Remember that the main vein lies on the deep fascia, and be not misled into merely tying one of the superficial veins which are often varicose in this region. The internal saphenous nerve runs with the vein in the lower thigh, and in tying it in the ligature or mistaking it for the vein. The ligature, injection, and division are carried out in the same way as in the saphena femoral junction.

(3) External saphena vein. In this vein the patient must be turned on his face. The operation is carried out in exactly the same way as the ligaturing of the internal saphena vein above the knee. The vessel must be tied as high as possible—just before it pierces through the deep fascia.

The Injection.—After the vein has been divided the injection is made into the distal end. There are two objections to making the injection through a needle. In the first place it is difficult, the exposed vein is very

[illegible] is likely to inject into [illegible] Secondly [illegible] syringe and needle it [illegible] and spreading [illegible] mucosities These difficulties can be [illegible] catheter

[illegible] vein is seized on either side with fine artery [illegible] so that the vein is on the stretch [illegible] there will be little or no bleeding from its open end [illegible] put in the vein before it was divided is now [illegible] (size 6 8) is threaded into the lumen of [illegible] will go As it passes down the catheter [illegible] but with a little manipulation it will [illegible] dressing fluid is now connected to the [illegible] while the catheter is slowly drawn up [illegible]

[illegible] dressing fluid should escape into the [illegible] rarely occur and the wound will be [illegible] swab is placed in the wound [illegible] is being made and before [illegible] with saline

[illegible] dressing media but my prefer [illegible] 40 per cent Either of these [illegible] cross of the vein they cause [illegible] in large doses their effect [illegible] I find it as effective as the [illegible] can be injected according to the degree of [illegible] vein and injected at the same [illegible] of 20 [illegible] be used Sodium salicylate [illegible] is not under local anesthesia [illegible] like pain in his leg starting thirty to [illegible] lasting about two minutes

[illegible] and lithocaine 2 c c of each [illegible] painless but in my experience [illegible] salicylate If the twin injection is [illegible] syringes and needles or catheters widely [illegible] and contact they precipitate each other [illegible]

[illegible] suggested by many for use in simul[illegible] I still use it for the injection of isolated

[illegible] medium that I [illegible] [illegible] [illegible]

[illegible] comparatively common complication when [illegible] for the injection but has not occurred often [illegible] injection. There is marked pain [illegible] the line of the veins. The patient should be [illegible] and a bandage applied to the affected parts [illegible] Occasionally the leg may remain sore [illegible] I have never seen any ill progress in [illegible]

[illegible] Well as already mentioned gross re[illegible] in which no attempt was made [illegible] I have seen no such failure [illegible] described. In one or two cases [illegible] which recited [illegible]

[illegible]

[illegible] can well [illegible] be cured by injections—[illegible] needed.

[illegible] valves [illegible] by transplantings of [illegible] tributaries [illegible] in mind.

[illegible] in junction with the [illegible]

[illegible] end of the divided vein [illegible]

[illegible] current passed down [illegible]

[illegible] any form of [illegible]

[illegible] described [illegible] and offers [illegible]

FURTHER STUDIES ON THE STERILIZATION OF T A B C VACCINE

By Sir [illegible] Wright, F.R.S., Major R. Rainsford Dyson, M.B., B.Ch., B.A.O.

In a previous communication (Rainsford Dyson) on the sterilization of the typhoid component of a typhoid vaccine of cultural [illegible] it was shown that it is possible to sterilize suspensions of *B. typhosus* without destroying the V antigen, the process of sterilization employed being a solution of chloramine-T (Dakin's solution). These methods, which have been [illegible] and found to be applicable easily on large scale, [illegible] simple process, extended experience has [illegible] the effect of the addition of sulphur containing substances (sulphur dioxide) and [illegible] (sodium metabisulphite). Knowledge of the effect by the alkali dynamic and of sulphur [illegible] the present [illegible] sulphur dioxide was employed, it was [illegible] the amount of sulphur employed could be accurately controlled. Sodium metabisulphite was chosen as it is soluble in normal saline, and has a high bactericidal action and is relatively harmless to human tissues when injected subcutaneously.

Techniques

Strain of B. typhosus used

All vaccines were prepared from the V strain No. 2. Stock cultures of this organism kept on egg-slant were transferred to broth and then [illegible] by frequent monthly passage.

Cultivation of Organism

The suspensions employed were all prepared from eight-hour broth cultures grown at 37° C. in a [illegible] (Bulloch's modified D.S.B.) in hot [illegible] pH 7·4.

Counting of Bacteria

In all these experiments the counting of bacteria was carried out by means of a Spekker Photoelectric Absorptometer (Hilger). In this instrument a beam of light of constant intensity is arranged to pass through a glass vessel containing the suspension of suspension under examination and the amount of light that passes through the material is converted into an electrical effect by means of a photoelectric cell; this is recorded and

[1] From the *Journal of Hygiene*, March 1939, by kind permission of the Cambridge University Press.

[illegible] in the circuit It follows [illegible] with normal saline solution [illegible] difference between the two will [illegible] bacteria

[illegible] the galvanometer [illegible] be correlated to the number of [illegible] galvanometer readings obtained in [illegible] number of bacteria and the graphs [illegible] are available for permanent use [illegible] than a minute by reference of a [illegible] The curves used in these experiments [illegible] obtained with various dilutions of [illegible] and independently by three different Helber slide methods In the [illegible] the accuracy of any single [illegible] in the calibration and the experiment [illegible] minus the error in calibration [illegible] in their relation to each other [illegible] the apparatus This is so small [illegible] employment of the absorptometer [illegible] accuracy of the experiments [illegible] of *B typhosus* for mice [illegible]

[illegible] Bacteria in Silver Nitrate Normal Saline

[illegible] with chemical [illegible] it was shown that although the [illegible] is not appreciably insoluble in normal saline it [illegible] bacteria [illegible] in such a medium There was [illegible] precipitated as chloride from silver nitrate [illegible] and prevent contamination [illegible] this belief was well founded and [illegible] of silver nitrate necessary

Silver nitrate [illegible] 0016 per cent calculated as silver was prepared [illegible] The solution was added to an equal volume of 1 7 per [illegible] A series of dilutions of this mixture was made [illegible] saline as the diluent To prevent loss of water in [illegible] subsequent alteration in the concentration of the salts [illegible] dilution was measured into a sterile 1 oz screw [illegible] contaminated with 0 1 c c of a twenty four hour [illegible] *B typhosus* 20 0 c c of 0 85 per cent sterile saline [illegible] as a control

A similar experiment was made using a broth culture [illegible] the contamination. After being contaminated the caps of the [illegible] screwed down tightly and the bottles allowed to stand at room [illegible] Sterility tests were made daily by inoculating some of the solution [illegible] bottle into broth tubes which were incubated for one week at [illegible] The results obtained (shown in Table I) show that normal saline to which nitrate has been added has considerable bactericidal properties.

PREPARATION OF VACCINES FROM SILVER FOR STERILIZATION.

Two methods in which the use of silver nitrate was examined.

Method 1.—An aqueous solution of silver nitrate equivalent to [illegible] per cent silver was added in an equal volume of 1·7 per cent saline. Equal volumes of this mixture and the suspensions of *B. typhosus* [illegible] mixed together under sterile conditions in screw cap bottles and placed in a refrigerator at [illegible] °C.

Method 2.—An aqueous solution of silver nitrate was prepared [illegible] to 0·004 per cent silver. Again the organisms suspended in distilled [illegible] mixed with an equal volume of the silver solution and placed [illegible]

TABLE I. BACTERICIDAL EFFECTS OF SILVER NITRATE IN 0·8 PER CENT. SALINE.

Time (Last digit denotes month of contamination)	Contaminating organism	Effect of silver nitrate			Saline control
		0·[illegible]	[illegible]	0·001	
0	*B. typhosus*	[illegible]	+	+	+
0	*Staphylococcus*	[illegible]			+
24	*B. typhosus*	[illegible]			[illegible]
24	*Staphylococcus*	[illegible]			[illegible]
48	*B. typhosus*	[illegible]			–
48	*Staphylococcus*	[illegible]			+
72	*B. typhosus*	[illegible]			+
72	*Staphylococcus*	[illegible]		+	

+ = Growth in test broth.
– = No growth in test broth after two weeks.

incubated at 37° C. for four hours. This was then decanted into a sterile screw cap bottle containing sufficient sodium chloride to render the liquid isotonic. Having been well shaken, the suspension was placed in the refrigerator after samples had been taken for sterility tests.

In both methods the final concentration of the silver was checked to 0·002 per cent. It is found that saline suspensions of *B. typhosus* [illegible] sterilized by the first of these two methods in a period varying from one to twelve days.

The maximum weight of suspension subjected to this treatment was equivalent to 20 × 10 bacilli per c.c. The time necessary for sterilization [illegible]

c

the effective time was variable. With suspensions of over 10×10^9 bacilli per c.c. the average time was eleven days and the maximum thirteen days. With suspensions of 5×10^9 per c.c. sterilization was usually effected in eight days and the most resistant in five days; contact was sufficient.

Using the second method it was found that 7.5×10^9 bacilli per c.c. could be [illegible] killed in four hours at 37° C., but more than this number could not be sterilized in this period. In the treatment by this method of suspensions containing 20×10^9 per c.c. it was found that sterilization was [illegible] after first four hours incubation at 37° C., the subsequent addition of [illegible] chloride, and then three days' storage in a refrigerator.

In carrying out the sterility tests in these experiments 0.5 c.c. of suspension [illegible] used for each test in order that adequate samples were utilized. The [illegible] was distributed amongst 10 × 20 c.c. tubes of broth and incubated [illegible] at 37° C. No suspension was considered sterile until it had [illegible] results in all tubes in three separate tests made on consecutive [illegible]. The precaution was rendered necessary because it was found that [illegible] in this suspension subjected to the treatment described in [illegible] method very few viable bacilli but that following this initial [illegible] effect of the silver became greatly diminished.

Some of the results obtained with these methods are shown in Table II.

TABLE II.—STERILIZATION OF *B. typhosus* SUSPENSIONS WITH SILVER NITRATE.

Suspension	Suspending solution	No. of bacteria per c.c.	Result	Remarks
A. 1, 5, 1	Saline	6×10^9	Sterile after 5 days at 4° C.	
A. C. S. [illegible]		10×10^9	Sterile after 8 days at 4° C.	—
A. C. S. 9	—	20×10^9	Sterile after 30 days at 4° C.	
H. S. 1		15×10^9	Sterile after 12 days at 4° C.	
A. 1. 1	Water	2×10^9	Sterile after 4 hours at 37° C.	Sodium chloride added after the first 4 hours at 37° C.
A. 1. 9		$\times 10^9$	Sterile after 4 hours at 37° C.	
A. C. 3		10×10^9	Sterile after 3 days at 4° C. following 4 hours treatment at 37° C.	
H. 1. 1		11×10^9	Sterile after 3 days at 4° C. following 4 hours treatment at 37° C.	

PREPARATION OF VACCINES USING SODIUM MERTHIOLATE.

Using saline suspensions of *B. typhosus* two volumes of suspension were added to one volume of a solution of the following composition:—

Sodium merthiolate	1.0 mg.
Sodium chloride	75.5 mg.
Sodium borate	14.0 mg.
Sterile distilled water	100 c.c.

This solution is isotonic. Sodium borate was introduced at the suggestion of the manufacturers of the merthiolate to act as a buffer, as the compound

tend to precipitate even in weak acid solutions.) The mixture was then left for twenty-four hours at room temperature and tested for sterility. Suspensions of 10×10^9 bacilli per c.c. were satisfactorily sterilized in this way.

The Effect of Silver Nitrate and of Sodium Merthiolate on the Agglutinability of Vi Strains of *B. typhosus*

In the many investigations which have been made to discover a method of sterilization which would leave the Vi antigen content of a culture unimpaired, a large number of processes and bacterial substances have been examined. In these it has been observed that in nearly every case where a suspension after sterilization failed to stimulate the formation of Vi antibody in rabbits the agglutination reactions obtained with the suspension showed an appreciable loss of resistance to O antibody. This property

TABLE III.—SHOWING THE AGGLUTINATION REACTIONS OF VARIOUS STERILIZED SUSPENSIONS OF STRAIN TY 2.

Serum	Dilution	Suspension				Dilution	
		Silver nitrate		Merthiolate			
		AGS 1	AGS 2	M 3	Ty	Ty 4
Pure Vi serum titre 1/800	1/80	+++	+++	+++	++	−
	1/160	+++	+++	+++	++	−
	1/320	+++	+++	+++	++	
	1/640	++	++	++	+	−
	1/1 280	+	+	+	(+)	−
	1/2 560	−	−	−	−	
Pure O serum titre 1/10 000	1/40	++	++	++	+	++
	1/80	+	+	+	(+)	+
	1/160	(±)	+	(+)	(+)	+
	1/320	−	(+)			++
	1/640	−	−	−	−	++
	1/1 280	−	−		−	−
	1/2 560	−	−		−	++
	1/5 000	−	−		−	
	1/10 000	−	−			+
H serum Oxford titre 1/250	1/250	+	+	−	+	+

has therefore come to be regarded as an almost essential characteristic of a vaccine if it was to produce an immunity to infection with Vi strains of *B. typhosus*.

The agglutination reactions of both silver nitrate and of sodium merthiolate sterilized suspensions to pure Vi, O and H antisera are shown in Table III, and it will be seen that in this respect these scarcely differ from those obtained with live Vi containing bacilli.

THE IMMUNOGENIC PROPERTIES OF SUSPENSIONS STERILIZED WITH SILVER NITRATE AND OF THOSE STERILIZED WITH SODIUM MERTHIOLATE

To assess the immunogenic value of these new vaccines their immunizing effect in rabbits was compared with that produced by live fully virulent V. tuberculosis containing bacilli and with a suspension sterilized by heating at 58° C. for one and half hours followed by the addition of 0.5 per cent phenol. This latter method of sterilization has been shown (Felix, 1934, 1935) to destroy all V. tuberculosis without stimulating properties of a vaccine.

Rabbits were immunized with suspensions sterilized by these different methods by giving three intravenous doses of 500, 1,000 and 2,000 million organisms respectively with a four days interval between each dose. Using these suspensions the procedure recommended by Felix (1934) of administering intravenous doses of 100, 200, 200 and 300 million at two-day intervals was adopted. This procedure occasionally made the rabbits extremely ill and they lost a considerable weight. Later it was discovered that if the animals received five preliminary doses of silver sterilized vaccine they could then be given the large doses of live culture without apparent ill effect. Rabbit V. 7 was immunized in this manner and received four intravenous doses of 500, 1,000 and 2,000 million organisms given at four day intervals, the first three consisted of silver sterilized vaccine and the last two of live culture V. containing bacilli.

One week after receiving the last injection each rabbit was bled from the heart, the serum was separated and after being passed through a Seitz E.K. filter was stored without preservative.

The titres of these sera are shown in Table IV.

TABLE IV.—SHOWING THE AGGLUTINOGENIC PROPERTIES OF VARIOUS SILVER STERILIZED SUSPENSIONS OF *B. typhosus*

Suspension used for immunization	Rabbit	Dose in million	Titres of antibodies present in the serum		
			H	O	A (Widal)
Tubercle bacilli by heating at 58° C. for 1½ hours without addition of phenol	P. 1	3,500	10,000	5,000	0
	P. 2	3,500	10,000	5,000	0
V. tuberculosis P. treated with silver	V. C. 1	3,500	10,000	5,000	1,600
V. tuberculosis P. treated with 1/3,000 silver nitrate	M. 3	3,500	20,000	5,000	640
Tubercle bacilli by heating at 58° C.	V. 1	800	10,000	2,500	1,280
Silver sterilized followed by living suspensions of Tb. 2	V. 7	5,500	10,000	500	800

The protective power of these variously produced sera was compared and tested by means of passive immunization experiments with mice. In these

[illegible] only coloured mice of 25 to 30 g. weight were used in [illegible] that albino mice were more resistant to infection with V strains of *B. typhosus* than the coloured varieties. Mice in groups of ten were injected subcutaneously with the different sera. The maximum dose of serum injected was 1.0 c.c. and the minimum 0.25 c.c. In order to ensure accuracy when the latter dose was used the serum was diluted with an equal volume of sterile saline and 0.5 c.c. of the mixture was injected. Twenty-four hours after receiving the serum each mouse was injected intraperitoneally with a test dose of a living suspension of *B. typhosus* strain Ty 2 prepared from an eighteen hour agar culture and contained in a total volume of 0.5 c.c. normal saline. Test doses of 4 × M.L.D. and 8 × M.L.D. were employed.

For controls mice unprotected by serum were injected intraperitoneally with the test dose suspension suitably diluted to allow 1 × M.L.D. to be administered in a total volume of 0.5 c.c. The results of these experiments (shown in Table V) were observed over a period of one week and the number of survivors after this lapse of time noted.

These experiments would appear to indicate that in the application of either silver nitrate or of sodium merthiolate for the sterilization of suspen

TABLE V.—SHOWING THE COMPARATIVE PROTECTIVE VALUE OF VARIOUS SERA PRODUCED AGAINST TYPHOID SERA

Suspension used for immunization	Serum	Dose of serum	Exp. 1 Res. to 4 × M.L.D.	Exp. 2 Res. to 4 × M.L.D.	Exp. 3 Res. to 8 × M.L.D.
Ty 2 sterilized by heating at 58° C. for 1½ hr. and subsequent addition of 0.5 phenol	Rabbit F. 1	0.5	—	—	0/10
		0.25	—	—	0/10
	Rabbit F. 2	1.0	8/10	0/10	—
		0.5	1/10	1/10	—
		0.25	0/10	1/10	—
Ty 2 sterilized with silver nitrate	Rabbit V.G. 1	0.5	10/10	—	—
		0.25	10/10	—	—
Ty 2 sterilized with 1/3 000 merthiolate	Rabbit V.M. 3	0.5	—	8/10	10/10
		0.25	—	7/10	10/10
Live suspensions of Ty 2	Rabbit V.V. 6	0.5	9/10	—	—
		0.25	8/10	—	—
Silver sterilized followed by live suspensions of Ty 2	Rabbit V. [illegible]	0.5	—	9/10	1/10
		0.25	—	9/10	0/10
Controls receiving 1/5 of test dose suspension		0	—		0/5
Controls receiving 1/4 of test dose suspension		0	—		0/5
Controls receiving 1/5 of test dose suspension		0	0/5		—
Controls receiving 1/7 of test dose suspension		0	0/5	0/5	—
Controls receiving 1/8 of test dose suspension		0	0/5	0/5	—

Exp. 1. Test dose suspension = 560 × 10⁶ of Ty 2. 1 × M.L.D. = 70 × 10⁶
Exp. 2. Test dose suspension = 640 × 10⁶ of Ty 2. 1 × M.L.D. = 80 × 10⁶
Exp. 3. Test dose suspension = 320 × 10⁶ of Ty 2. 1 × M.L.D. = 80 × 10⁶
Denominator = No. mice tested.
Numerator = No. of survivors after 1 week.

sions of *B. typhosus* a process is available which is without immediate destructive effect on the Vi antigen or any of the antigens essential for a potent vaccine. However in these experiments only freshly prepared vaccines were employed i.e. no vaccine was more than one week old (dating from the time of completion of the sterility tests) when the first immunizing dose was given. The question therefore as to whether there would be any advantage in employing one or other of these new vaccines in place of the present heat killed and phenolized vaccine must depend upon the permanence of their antigenic content under various conditions of storage.

Investigations into the Antigenic Stability of Vaccines

The subjects of these investigations were the following vaccines:

Vaccine K 2.—This suspension was sterilized by the katadyn process. It originally consisted of a suspension of 15×10^9 organisms per c.c. This was diluted one third with a sterile katadyn treated normal saline solution and after being bottled was stored in the refrigerator at 7° C.

Vaccine A.G.S. 4.—The suspension A.G.S. 4 (*see* Table 1) was diluted down to an opacity equal to $2{,}500 \times 10^6$ organisms per c.c. and the total volume of vaccine thus obtained was divided into two equal portions. To one portion sufficient silver nitrate was added to allow a final concentration of 0·001 per cent. silver to remain in the vaccine and in the other double this amount. These two vaccines were bottled off separately in amber vaccine bottles and some of each was stored in the dark at room temperature and others at 7° C.

Vaccine A.G. 6.—The suspension A.G. 6 (*see* Table 1) was diluted down to an opacity equivalent to $5{,}000 \times 10^6$ organisms per c.c. with sterile 0·85 per cent. saline containing 0·002 per cent. silver. After being bottled it was stored at 7° C.

Vaccine M. 3.—A suspension of *B. typhosus* $10{,}000 \times 10^6$ organisms per c.c. was sterilized with a concentration of 1/3,000 sodium merthiolate. This was then diluted one half with normal sterile saline and stored in the refrigerator at 7° C.

The vaccines A.G.S. 4, A.G. 6 and M. 3 were examined after a period of six months and K. 2 after eighteen months storage.

Before proceeding to an antigenic analysis of these vaccines their sterility was tested. The tests showed that the vaccines A.G. 6, K. 2 and M. 3 were sterile but that approximately 30 per cent. of the bottles containing the vaccine A.G.S. 4 were contaminated with a mould. This contamination was probably introduced with the silver nitrate when it was added to the vaccine after the original suspension was diluted with sterile saline to its required opacity. This was the only vaccine in which silver in an unsterilized form

[illegible] in the [illegible] Vi agglutinins in any of these sera is indicative of true Vi antibody. Table VII shows that with the exception of the two sera K 2 and V 8 the degree of protection afforded by any serum was proportional to its Vi antibody content as demonstrated by *in vitro* tests (Table VI).

The serum V 8 afforded less and K 2 slightly more protection than is to be expected if only their Vi titres are considered. The anomalous nature of the results obtained with these two sera can be explained to some extent by the recent work of Grasset and Lemin (1937) who have shown that the maximum protection against infection with $^{-}$Vi strains of *B. typhosus* can be obtained only with a serum containing both Vi and O^{-} antibody. It has been seen (Table VI) that although the Vi titre of serum V 8 is high the O titre was comparatively low and the deficiency of the latter antibody probably explains why its protective qualities were less than might have been anticipated. This theory is supported by the results of the experiments made with the sera K 2 and J 2, both of these had the same Vi titre but the serum K 2 contained three as much O antibody as J 2 and afforded the better protection.

These experiments therefore demonstrate that a vaccine prepared with

TABLE VI. SERIES I. SUSPENSIONS OF TYPES 1 AND 2 PRESERVED WITH SILVER CITRATE OR SILVER THIOSULPHATE, THEREAFTER VACCINES

Suspension used for immunization		Preservative	No. of organisms per c.c.	Storage temp. °C	Age of vaccine when used	Rabbit number	Dose in millions	Titres of antibodies (rabbit serum) V (Wright)	H (1)	H
Ty 2 sterilized with silver citrate (method 1)	A G S 4	Silver 0·001 %	2 500 × 10⁶	7	6	J 1	3 500	520	5 000	5 000
	A G S 4	Silver 0·001 %	2 500 × 10⁶	Room	6	R 1	3 500	80	5 000	5 000
	A G S 4	Silver 0·002 %	2 500 × 10⁶	7	6	J 2	3 500	160	5 000	5 000
	A G S 4	Silver 0·002 %	2 500 × 10⁶	Room	6	R 2	3 500	60	1 280	10 000
Ty 2 sterilized with silver citrate (method 3)	A G 6	Silver 0·002 %	5 000 × 10⁶	7	6	A G 6	3 500	320	5 000	5 000
Ty 2 sterilized with ketadyn	K 2	Silver 0·002 % (approx.)	5 000 × 10⁶	7	18	K 2	3 500	160	5 000	5 000
Ty 2 sterilized with merthiolate	M 3	Merthiolate 1/5 000	5 000 × 10⁶	7	6	M 31	3,500	0	2 500	1 280
Freshly prepared suspensions of Ty 2 sterilized by heating at 58° C. for 1½ hr. followed by the addition of 0·5% phenol		Phenol 0·5%	1,000 × 10⁶	—	—	P 1	3 500	0	5 000	10 000
						P 2	3 500	0	5 000	10 000
						P 3	3 500	0	5 000	10 000
Living suspensions of Ty 2 preceded by freshly prepared suspensions sterilized with silver citrate		None	—	—	—	V 7	5 500	500	2 500	10 000
Living suspensions of Ty 2		None	—	—	—	V 8	800	1 280	1 280	2 500

[illegible] thium merthiolate added after storage for only [illegible] months at 7° C [illegible] the any Vi antibody response in the rabbit. This may not necessarily be due to a directly destructive effect by the merthiolate on the Vi antigen. Felix (1937) found that slightly killed suspensions stored for the [illegible] period but without any preservative added were equally ineffective.

TABLE VII. SHOWING THE COMPARATIVE PROTECTIVE VALUE OF SERA PRODUCED BY IMMUNIZATION WITH STORED VACCINES.

Suspension used for immunization	Rabbit serum	Exp. 1 Group	Exp. 1 Test	Exp. 2 Result	Exp. 2 Test
Freshly prepared suspension of Ty 2 sterilized by heating at 56° C. for 1½ hr. followed by the addition of 0.5% phenol	P. 1	(2)	—	10	
	P. 1	0.50	—	10	
	P. 2	0.25	1/10	—	
	P. 2		1/10		
	P. 3	1.00	10		
	P. 4	0	—	—	0.10
	P. 4	1	—	—	0.1
Suspension K. 2. Ty 2 sterilized with kataphyn and stored for 18 month at 7° C.	P. 3	0	0	1.10	
	P. 3	[illegible]	10	1.10	
Suspension A.G.S. 4. Ty 2 sterilized with silver citrate (method 1) and stored at 7° C. for 6 months and preserved with 0.001% silver	P. 1	1	—	—	8.10
	P. 1	1.00	—		10
Suspension of A.G.S. 4 preserved with 0.002% silver and stored for 6 months at 7° C.	P. 6	[illegible]	—	—	0.1
	P. 6	1.5	—		1.1
Suspension of A.G.S. 4 sterilized with silver nitrate (method 2) and preserved with 0.002% silver and stored for 6 months at 7° C.	A. 6	[illegible]	—	—	
	A. 6	0	—		1
M. 3.— Ty 2 sterilized with merthiolate and preserved with 1:5000 merthiolate and stored for 6 months at 7° C.	M. 31	0.5	—	—	
	M. 31	0.5	—		1.1
Living suspensions of Ty 2 prepared by freshly prepared suspension sterilized with silver citrate	[illegible]	[illegible]	10	1.10	
	[illegible]	10	0.10	1.10	
Living suspensions of Ty 2	[illegible]	0.5	—	—	
	[illegible]	1			
Controls receiving 1/8 of test dose suspension		[illegible]			
Controls receiving 1/4 of test dose suspension		1	0	—	
Controls receiving 1/4 of test dose suspension		0	—	5	0
Controls receiving 1/8 of test dose suspension		0	—	0.5	0.5

Exp. 1. Test dose suspension = 560×10^6 L.S.L.D. 50×10^6
Exp. 2. Test dose suspension = 320×10^6 L.S.L.D. 80×10^6
Denominator = Number tested.
Numerator = No. of survivors after 1 week.

It is more probable therefore that this loss of Vi antigen is due to an inherent instability of this substance. On the other hand the experiments show that silver while it does not entirely prevent the loss of this antigen

appears to have some effect by which the rate of loss is greatly retarded However this effect is only obtained when the vaccine is stored at a low temperature It would also appear that the weight of silver which can be added to a vaccine to preserve the Vi antigen is limited and must be in proportion to the weight of bacteria per c c in the vaccine for a vaccine of $2 \cdot 800 \times 10^6$ organisms per c c with 0 002 per cent silver added produced only half as much $^{-}$Vi antibody as a vaccine with the same count but containing 0 001 per cent silver further a vaccine with a count of $5 \cdot 000 \times 10^6$ organisms per c c and with 0 002 per cent of silver produced Vi^{-} antibody in amount equal to that produced by a vaccine with half the count and half the amount of silver i e 0 001 per cent These three vaccines had all been stored under the same conditions for six months

It may be remarked that the author in order to test whether any injury might follow the injection of vaccines containing silver injected himself subcutaneously with 1 0 c c of a solution of 0 85 per cent saline containing 0 002 per cent of silver (added in the form of silver nitrate) the injection caused no discomfort and except for an area of half an inch immediately surrounding the site which was pinkened for twenty four hours there was no coloration of the skin

Summary

(1) Silver nitrate or sodium merthiolate can be used for the sterilization of suspensions of *B typhosus* and neither have any immediate destructive effect on the $^{-}$Vi $^{-}$O^{-} or H^{-} antigens

(2) Two methods of employing silver nitrate as a sterilizing agent are described

(3) Physiological saline solution with silver nitrate added is bactericidal for *B typhosus* and the staphylococcus but has no inhibitory action on the growth of moulds

(4) Vaccines sterilized and preserved with silver nitrate after storage for six months at 7° C were found to have retained their $^{-}$Vi^{-} antibody stimulating properties

(5) A vaccine sterilized and preserved with kurodyn after storage for eighteen months at 7° C still contained some Vi antigen and was superior as an immunogenic agent to a freshly prepared heat killed phenolized vaccine

(6) It would appear that the stability of $^{-}$Vi antigen is increased by the addition of silver within certain limits but this effect is only obtained if low temperature storage conditions are maintained

(7) A vaccine sterilized and preserved with sodium merthiolate after six months storage at 7° C failed to stimulate any $^{-}$Vi^{-} antibody in the rabbit

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HYDATID DISEASE OF THE LUNG AND PLEURA

[illegible] SCHRIRE M A M B Cant F R C S I

[illegible] *Registrar Groot Schuur Hospital Cape Town*

HYDATID [illegible] in man is caused by infection with the cystic stage of *Echinococcus granulosus* a cestode worm mostly found in the small gut of infected dogs The dog may have thousands of these worms in its intestine and is constantly shedding ova and segments in its fæces *E granulosus* reaches the dog through its intermediate host which is most commonly the sheep and man is infected because of the close association that exists between dogs and sheep have developed As the vast majority of human infections are through dogs and as childhood is the age when promiscuous and intimate contact between man and dog most commonly occurs infection usually takes place in childhood and the slow growth of the cysts accounts for its often being only in adult life that the disease becomes manifest

In man the ovum is swallowed and hatches in the upper part of the small gut A hexacanth or embryo with six hooks is released penetrates the gut wall is swept up into the portal circulation and finds itself in the liver which is the first great filter and it is here that over 75 per cent of hydatids occur Occasionally the filter is inefficient and the hexacanth passes along the hepatic veins into the right side of the heart and is conveyed by the pulmonary arteries to the lungs these act as second lines of defence and filter the hexacanth so that it is here that the next frequent incidence of the cysts occurs about 10 per cent are found in the lungs the remaining 15 per cent being distributed over the muscles kidneys spleen bone and other organs

Not every case of hydatid disease of the lungs develops symptoms and of those that do not all are diagnosed It follows therefore that hydatid disease of the lungs is a comparative rarity and except in heavily populated sheep raising countries (a sociological anomaly) the condition will be met with but rarely The infection of town dogs from eating infected sheep viscera around abattoirs is usually controlled by public health authorities

[1] From the *South African Medical Journal* December 1938 by kind permission of the Editor

[illegible] deposited in the lungs the tissue much rapidly simulates a [illegible] nuclear [illegible] eosinophilic reaction and is often destroyed. Occasionally however it [illegible] and begins to grow [illegible] tubules and becomes rapidly lined [illegible] the typical laminated membrane which possesses an innermost germinal [illegible] and an outer chitinous layer. In the lung tissue itself the cellular reaction [illegible] fibroblasts strike their appearance and an adventitious [illegible] capsule. Growth may occur in all three dimensions unless some [illegible] is encountered. That portion of the cyst which is derived [illegible] is the germinal layer which produces the laminated layer [illegible] and secretes hydatid fluid towards the inside of the cyst [illegible] entirely derived from the host. The cyst contains hydatid [illegible] which are small aggregates of scolices or potential [illegible]. These scolices must be swallowed by a dog in whose intestine [illegible] develop to mature worms. The cycle is now complete.

[illegible] may be necessary to consider the development of daughter and [illegible] cysts. According to Deve [1] these occur only in man and [illegible] change in mechanical interference with the cyst; they [illegible] the defence reaction of the fully formed cysts and [illegible] complete mature editions of the mother cyst. Owing to [illegible] the heavy thorax and to the comparative resilience of the lungs [illegible] cysts [illegible] in primary pulmonary hydatids.

Spread of the lung cysts occurs in several ways—(*a*) Blood spread. This is the commoner [illegible]. The hexacanth is carried by the pulmonary artery and is deposited in any portion of the lung. Multiple cysts of the lung are thus caused by the early infection and rapidly forming new cysts are probably [illegible] rather than the hepatic veins or actually in the radicles of the right heart. (*b*) Direct extension. The second way in which hydatids reach the lung is by direct extension from the liver through the diaphragm into the right base. In this form of pulmonary involvement [illegible] the cysts are [illegible] and the condition apart from the [illegible] sputum is ushered with perforation of [illegible].

Sequelæ

The sequelæ of pulmonary hydatids may be divided for purposes of [illegible] into those of uncomplicated pulmonary cysts, ruptured pulmonary [illegible] and those of pleural pulmonary cysts.

Uncomplicated Pulmonary Cysts

The lung parenchyma itself is almost completely insensitive to most [illegible] and it is not an uncommon occurrence for a hydatid to be discovered [illegible] in the course of an examination for some entirely different

[illegible]

[illegible]

[illegible]

may be demonstrated in the contents of the cyst but no anything [illegible] more usually however he remains [illegible] the immediate attack and begins later to show signs of interstitial [illegible] Another symptom which may be very distressing is the occurrence of anaphylactic reactions owing to inoculation with hydatid antigen [illegible] ly results in a rash and temperature which disappears within the [illegible] few days There is a marked increase in the eosinophilia following rupture and a normal count of 7 to 10 per cent may show a steep rise up to 70 per cent or more (*b*) the second group of symptoms results from infection of the ruptured cyst They are indistinguishable from those of lung abscess with the single exception that [illegible] and hooklets may be recovered from the sputum and that occasionally pieces of the cyst wall may be coughed up The pieces may be large enough to [illegible] serious respiratory embarrassment and may even kill by asphyxiation if they become impacted in the trachea

The signs and symptoms of a ruptured pulmonary cyst may thus be summarized as an intermittent cough fetid offensive sputum clubbing of the fingers and a polymorphonuclear leucocytosis which replaces the eosinophilia Physical examination will reveal diminished resonance and diminished breath sounds over the area affected if the abscess is full and the bronchus blocked Coarse rales with amphoric breathing occur when the cavity is open to the communicating bronchus

X rays show a cyst containing a fluid level whose height depends upon the position of the draining bronchus and upon its degree of patency This so called hydatid pneumocyst can only be seen with a picture of the chest taken in an erect position Should the bronchus become completely obstructed the air imprisoned in the cyst above the fluid gradually becomes absorbed and the cyst looks apparently smaller The cough and sputum disappear but the persistence of the pyrexia the malaise and the leucocytosis show that the patient is far from cured Radiologically the fluid level disappears and owing to a local arteritis there is centripetal retraction of the surrounding lung tissue and the cyst [illegible] It cannot be too strongly urged that the condition is still a potential menace It is extremely unlikely that an infected hydatid pulmonary cyst will ever become walled off and calcified and is [illegible] considered the only sure criterion of a harmless cyst [illegible] will require surgical treatment just as urgently as the draining [illegible] Extensive [illegible] as great pulmonary dangers with the added risks of [illegible] exudate empyema and of sudden intrabronchial rupture

Hepatic Pulmonary Hydatids

The [illegible] of this condition depend upon the enlargement of an [illegible] hydatid its extension upwards into the subdiaphragmatic

[illegible] perforation of the diaphragm with displacement of diaphragm [illegible] pleurisy and adhesions penetration of the lung and external rupture [illegible] of the bronchi in the right lower zone The symptoms therefore appear in the following chronological order Hepatic pain of a throbbing nature is felt in the right upper abdomen for a varying time and is followed by pain referred to the tip of the right shoulder This stage represents the [illegible] of the right half of the diaphragm prior to its perforation It is followed by sharp stabbing pains worse on deep respiration and on coughing which are due to the basal pleurisy An intractable non productive cough now begins to appear and suddenly a large gush of hydatid fluid blood bile and membrane and daughter cysts are brought up Physical examination will reveal a stony dullness of the right lower chest absent breath sounds and the usual displacement of the liver margin Apart from the expectoration of daughter cysts or the finding of hooklets in the sputum the signs and symptoms are indistinguishable from those occurring in a perforating subphrenic abscess Radiologically the right leaf of the diaphragm is found in the earlier stage to be elevated and relatively immobile Later this landmark is obscured by the shadows of the liver below and of the fluid above A fluid level as a rule is not observed in the cysts until it has been coughed up

Hydatids of the Pleura

It is conceivable that hydatid implantation into the visceral pleural membrane may take place when the hexacanth gets into the blood stream but this must be an extremely rare event Peripheral pulmonary hydatids will enlarge towards the pleura and may actually appear to lie pleural in origin although they are really pulmonary Rupture of such cysts into the pleura occasionally occurs and it is then that the typical appearance of hydatid fluid daughter cysts and hydatid membrane in the pleura occurs The condition is rare

Treatment

It is necessary to realize before discussing treatment of this essentially surgical condition that uninjured cysts have been known to become calcified and to lie thus rendered safe that cysts that do happen to rupture into a bronchus given sufficient drainage and enough patience will often be cured after the abscess contents and the cyst wall are coughed up and that it is sometimes more dangerous to attempt to drain and explore a deeply lying cyst in the hilum of the lung than to leave it alone and hope for it to rupture into one of the adjoining bronchi The objections to the policy of leaving every cyst until a natural cure is attained are that until the cyst has ruptured into the bronchus the patient suffers from the presence of a growing intrathoracic mass and from its effects on the surrounding organs that there is

always present the risk of sudden [illegible] possible drowning in his own fluid [illegible] there is no guarantee [illegible] rupture will not take place into the pleura and [illegible] Even after a bronchial rupture has occurred the prognosis [illegible] treatment is subject to many months of pyrexia [illegible] he has coughed up his hydatid and he probably will [illegible] resulting area of bronchiectasis in the parenchyma of the lung [illegible] been situated. During this period of illness he [illegible] the risks attendant upon [illegible] suffering from other [illegible] which are the

[illegible] and [illegible] and three. He [illegible] generally owing to the [illegible] All these possibilities tend to make [illegible] the technique of intrathoracic [illegible] the experienced operator will become [illegible]

[illegible] can be sufficiently [illegible] operation [illegible] primary [illegible] all cases of unilocular [illegible] large and fully superficial unilocular [illegible] small dispersy is if they are

unlikely to rupture [illegible] pleura [illegible] probably empty the [illegible] into a large bronchus is [illegible] shed up. [illegible] there is a multiple [illegible] which is probably [illegible] cardiac [illegible] operation should be [illegible] upon the ruptured cyst [illegible] they occur. [illegible] unruptured cysts [illegible] first tackled by a two stage operation after [illegible] by antero posterior and lateral radiographs and by properitoneal [illegible] in the lithotomy position. That portion of the chest wall which the cyst approaches most closely is marked with an indelible pencil and the patient is transferred to the operating theatre.

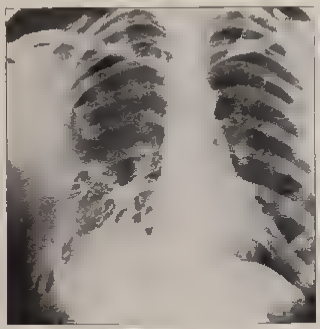
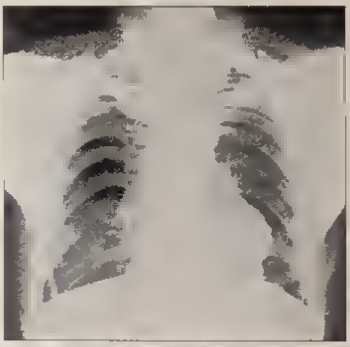


Fig. [illegible] The [illegible] the remnant [illegible]

For the first stage it is [illegible] to use local anesthesia [illegible] that positive pressure in the [illegible] for [illegible] the pleura be accidentally opened. [illegible] vertical or [illegible] may be used and a window is made in the chest wall by removing [illegible] from such pieces of rib and excising the inter costal muscles by bundles between ligatures. In uncomplicated cases the [illegible] pleura is visible and the lung can be seen coming [illegible]. The cyst often projects from the surface of the lung as [illegible] distinguish the organ tends to return. A tube if [illegible] is not placed [illegible] the window and usually soaked in full strength [illegible] the exposed parietal pleura and the wound is closed in layers [illegible]

[illegible] Should the pleura have been [illegible] opened the tear should be [illegible] and the same programme [illegible] Positive pressure anæsthesia should be used to diminish the extent of the pneumothorax and to expand and hold the lung against the parietal chest wall. Two weeks later the second stage is undertaken. The patient is travered and screened so as to localize the position of the cyst in relation to the easily visible circle of [illegible] Positive pressure gas and oxygen are used to minimize the risk of aspiration of the cyst into a bronchus. The wound is reopened, the iodine [illegible] and the short [illegible] lung is inspected. The cyst is localized



[illegible]

[illegible] to the [illegible] exploring needle [illegible] and the [illegible] Ampoule [illegible] is injected and the cyst opened with 10 [illegible] of [illegible] formalin. After a few minutes [illegible] the formalin [illegible] and the needle and the cyst is opened. Some [illegible] [illegible] the cyst wall [illegible] to push itself out but [illegible] experience. The cyst and [illegible] stitched with the image [illegible] removed piecemeal with [illegible] The lung immediately expands and often fills the cavity [illegible] the residual lung [illegible] in this by the positive [illegible] A drain [illegible] is inserted down to the cavity to allow [illegible] the cavity [illegible] and the chest is closed. The

[illegible] Convalescence [illegible] careful the patient [illegible] for this large [illegible] after the first operation

Ruptured [illegible] pleurisy exists [illegible] the same manner There are however several important diff[illegible] Owing to the pleural irritation there may be quite [illegible] pleural fluid This should be aspirated prior to [illegible] operation to allow the visceral and parietal pleura to come [illegible] another The first stage is then carried out as above During the second

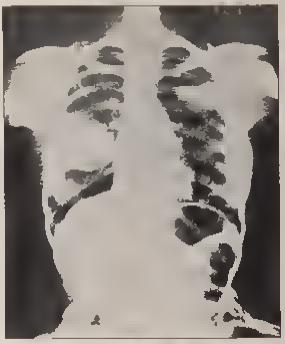
[illegible]

stage after the [illegible] immediately [illegible] into the [illegible] bronchial fistula is necessarily present [illegible] months and the tube is kept [illegible] in the position previously [illegible] be required to assist closure

Theoretically hepatic [illegible] subdiaphragmatic aspect [illegible] and drained dependently and the [illegible] to its length and the torturous [illegible] ever the diagnosis is usually [illegible]

[illegible] and by then the whole condition is infected. One is [illegible] with the problem of dealing with a subphrenic abscess and preventing [illegible] the peritoneum. It is therefore better to open the pleura through the bed of the tenth rib, explore the dome of the diaphragm, and clear out the hepatic hydatid mother cyst through the diaphragmatic perforation which may be [illegible] enlarged if necessary. The pleura as well as the [illegible] liver may then be drained.

[illegible] of hydatid of the pleura may be divided into two sections, [illegible] the transmission of the pleural rupture of a pulmonary hydatid which



[illegible]

[illegible] Before [illegible] injection [illegible] the [illegible] Secondly, the [illegible] of dissembling pleural hydatids [illegible] exposed [illegible] through an [illegible] [illegible] and the [illegible] ribs, [illegible] and [illegible] pleura [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

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A THUMBNAIL SKETCH OF PUBLIC HEALTH IN CRETE

By Surgeon Commander L. F. Strugnell, M.B., R.N.

[illegible] Medical Officers are enjoined to consider as an important part [illegible] duties the establishment of correct with the local medical fraternity [illegible] which their ships may find themselves a regulation charged with [illegible] pleasure in its execution but fraught with tribulation for those [illegible] not the gift of tongues. The fact that the information herein [illegible] was obtained in the course of a foreign meeting between an [illegible] and a Greek each endeavouring to convey his ideas in French [illegible] the excuse for this paper's sketchy nature and for its obvious [illegible]

The meeting was brought about through the good offices of the Swedish [illegible] Mr. George Naxakis of Canea whose English was above suspicion but his own affairs claimed him at the time of the visit and his ready [illegible] English and fluent powers of translation were sadly missed.

The progress in Public Health carried weight in the minds of the Greek [illegible] it was apparent during a visit to Corfu last summer but to find [illegible] established organization in full career in the seemingly sparsely populated and [illegible] Isle of Crete is a little surprising especially after [illegible] experience of the more primitive conditions on the shores of Navarin

Bay so that the opportunity of first hand [illegible] the Health Centre in Canea was anticipated with lively interest

Greece is progressive in matters other than public health [illegible] macadam road runs eastward along the coast from [illegible] but the [illegible] section to Canea remains a Via Dolorosa over which the journeys [illegible] inches of dust at imminent peril to the springs of the car Trenches [illegible] the other side of this road trees are being uprooted and stones [illegible] from the neighbouring hillsides are being dumped for the purpose [illegible] widening and remaking is going on apace Doctor Evangelos Papanronakis the district physician in charge of the health centre did the honours of his establishment with evident pleasure and pardonable pride

The Health Services are Government services and for their operation Crete is divided into four roughly equal areas each with its centre Canea being the western section whence Dr Papanronakis controls the other sections In this connection more assistants would be very welcome but Greece is not a rich country and the matter was mentioned only to be dismissed with a smile

The Health Centre is in a large old house in the residential part of Canea its numerous rooms being devoted each to its own purpose [illegible] special clinic or an office The walls of Dr Papanronakis' own office are decorated with charted vital statistics morbid statistics and a large map of the island whereon are marked the health districts The secretariat three in number have their office in the adjoining room and here the main card indexing is carried out in most efficient modern fashion Three sanitary inspectors are employed on outside duties bringing their information to this office

Vital statistics show a very satisfactory preponderance of births over deaths a state of affairs which the chief reveals is being on the up grade during the last ten years

While patients wait in the large room on the ground floor pictorial hygienic propaganda meets their eyes in all directions the infant feeding poster with the representations of the old fashioned tube and teat and of the dummy obliterated by a large black cross a clear sequence showing the folding and application of baby's napkins a graphic warning of the dire results of untreated syphilis this last a souvenir of a visit to Paris by Dr Papanronakis and others so numerous that the memory fails to retain the visual impression gained by the rapid passage through the room

There is a clinic for pulmonary tuberculosis a small consulting room and through a curtain a modern x ray machine on a vertical frame with a fluorescent screen in perfect balance the product of Messrs Siemens Across the hall the oculist was observed dealing with an old opiscum third

[illegible] his meal appeared to be [illegible] the school [illegible] and [illegible] evidence [illegible] showing infection rates progressive [illegible] as the [illegible] Tuberculosis 28 [illegible] 5 per cent [illegible] the total [illegible] under treatment his well-kept dental [illegible] [illegible] dental places

[illegible] that forenoon some are open only [illegible] afternoon, but all were ready for [illegible] date card index the venereal complete with [illegible] my position crutches ready rigged the carts [illegible] arsenic and bismuth treatment the consulting [illegible] *maladies pathologiques* or mental conditions the dental [illegible] afternoon principally by school children but to which any [illegible] may apply for treatment well lit by daylight but lacking a [illegible] lamp such as had elicited cries of admiration from my host [illegible] the ships dental surgery

[illegible] Here's those an afternoon attendance a neat nurse was enter[illegible] [illegible] index card she was one of three visiting nurses trained [illegible] to the houses of the poor an infant welfare bent and [illegible] that the insistence on health for the children is one [illegible] features of the Centre The children are subjected [illegible] and Calmette's vaccine is subsequently used but with [illegible] The rate of infantile diarrhœa appearing [illegible] shows a welcome decline

[illegible] and maternity services may have been passed by in the [illegible] fog but they were certainly not discussed at [illegible] they are afforded but the Municipal Hospital which [illegible] a very blank

[illegible] shower baths have been erected once again for [illegible] children

[illegible] Crete there were discussed typhoid [illegible] fair length for in this Dr Papanomakis is an expert [illegible] human and canine Last year [illegible] typhoid but early [illegible] and the problem is one that is not easy of [illegible] money When water runs short in [illegible] drinking from wells with the inevitable [illegible] and indeed carriage of sewage by [illegible] of practical politics in a community whose [illegible] by the available supply A new and ample [illegible] brought to the town and this is expected to

[illegible] consumption if well nurse and [illegible] [illegible] [illegible] must at necessity be made slowly [illegible] [illegible] [illegible] but a practicable proposition.

[illegible] anti-malarial measures are the chief [illegible] covered against [illegible] The somewhat extensive swamps are sprayed with Paris green mixed with powdered earth, the knapsack type of [illegible] pump being used, while the little fish Gambusia has been imported [illegible] in a [illegible] pool in the garden of the Centre and is now being distributed to the fresh water swamps as required.

Kala azar and oriental sore both exist in fair quantity in Crete, and Dr. Papantoniakis appears to be in a doubt that the [illegible] the disease and the vector, the Phlebotomus fly. He has a collection of [illegible] photographs of dogs with patches of depigmentation and of [illegible] of children with spleens marked out [illegible] almost the pelvic brim, and of [illegible] designated with [illegible] has been working on this disease for some time, and [illegible] Professor Adler who spent at his house for six months which [illegible] [illegible] I saw a paper in English on this subject published under the [illegible] Liverpool School of Tropical Medicine, but time did not allow [illegible] a cursory glance at it.

Infection seems to be [illegible] from [illegible] dogs. [illegible] 1,250 examined, 250 gave a positive result, the [illegible] appeared to be applied but no marked hypertrophy of parts. I did not [illegible] illuminating on this point. I did not gather what [illegible] given to canine patients, but in the most efficient and [illegible] dispensary I saw the German preparation [illegible] preferred for children at least since it [illegible] route to a similar preparation supplied by an Indian firm [illegible]

After inspecting Leishman Donovan bodies and [illegible] of Phlebotomus in the laboratory we proceeded to the Municipal Hospital.

Picturesque janitors in dark blue uniforms of [illegible] baggy breeches opened the gates; the uniforms [illegible] pattern, but tradition entered the Hospital on [illegible] for with the Municipality the matchmaker is Pluto.

Piles of stone and building materials lay in the grounds [illegible] of another story, new annexes were in course of [illegible] corridor a zymotic block was being erected. In the new [illegible] included a modern operating theatre and a dispensary. [illegible] wards were bright and cheerful, and the patients looked happy.

A small separate block houses the maternity wards and [illegible] one for clean and the other for septic cases, while in [illegible]

a more [illegible] to the accommodation and treatment of female [illegible] cases.

N[illegible] came the Tuberculosis Sanatorium on a hill outside the [illegible] pressed [illegible] had to be regretfully declined.

[illegible] of the reception extended to me by the Director and Staff of the Hospital was matched by that of the Mayor who came specially to the Hospital while I was there, the [illegible] appearing to me to be a pretty compliment to the Naval Medical Service. Their final graceful act was to thank me for the [illegible] of my visit, whereupon the conversational horizon became completely clouded, and I took refuge in expressing my thanks on paper in plain English to my good friend Naxakis the Mayor, and above all to their happy [illegible] the chief of the Health Centre.

◆

Clinical Notes

A CASE OF SUBCORTICAL CEREBRAL TUMOUR SIMULATING POST-VACCINAL ENCEPHALOMYELITIS

By Surgeon Lieutenant-Commander F. H. MURCHISON, M.B., R.N.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

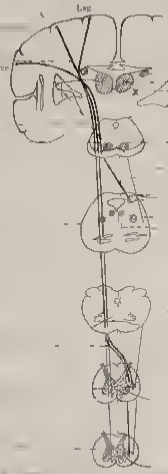
[illegible]

[illegible]

[illegible]

[illegible]

[illegible]



[illegible] of Lateral and Posterior Spinal Tract

[illegible]

[illegible] Kerm[illegible] appearance of m[illegible] [illegible] on the other hand [illegible] [illegible] [illegible]

after th[illegible] It was considered that [illegible] injection of serum [illegible] theoretically [illegible]

[illegible]

SUMMARY

[illegible]

A [illegible] dogs [illegible] as the onset [illegible] the case had follow[illegible]

TWO INTERESTING CASES

By [illegible] O. D. B[illegible]

[illegible]

Case [illegible] College [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

THE [illegible] OF WORKING [illegible]

By [illegible] W. A. FOSBERY [illegible]

[illegible]

[illegible]

—Lun[illegible] which [illegible] off in th[illegible] Would [illegible] the [illegible]

—Sy[illegible] come [illegible]

—Sy[illegible] hour after [illegible] Hew [illegible]

[illegible] lower [illegible] there [illegible] other [illegible]

[illegible] left [illegible] still [illegible] then [illegible]

Correspondence.

[illegible] FROM THE USE OF GA[illegible]

TO THE EDITOR OF THE JOURNAL OF THE ROYAL NAVAL [illegible]

[illegible]

[illegible]

Tube A

℞ Sod. bicarb. [illegible] 3 per cent.
Adip. lan. anhydr. [illegible] āā 10
Aqua dest.
Paraffin molle ad 100

Ft. Ung. [illegible]

Sig. Alkaline eye salve for gas poisoning. First twenty-four hours.

The second twenty-four hours the following:—

Tube *B*

℞ Ung. ac. boracis 10 per cent.

Sig. Ophthalmic ointment. Tube. Second twenty-four hours.

Indeed Tube B can be continued indefinitely. These tubes [illegible] Messrs. Allen and Hanburys according to my instructions.

The patient pulls the lower lid down [illegible] the [illegible] ment along the lower fornix, then the patient looks down [illegible]. Thus the upper lid [illegible] the ointment. This method [illegible] the use of a glass rod and the ointment is not [illegible]. The eye should be kept bandaged.

I gave this prescription to all soldiers and [illegible]

I am, [illegible]

Yours, &c.,

[illegible]

101, *Harley Street,*
November 1, 1939.

THE EXAMINATION OF CANDIDATES FOR AIR [illegible]

TO THE EDITOR OF THE JOURNAL OF THE ROYAL NAVAL MEDICAL [illegible]

Sir,—In view of the responsibility which now rests [illegible] for the examination of candidates for pilots, the paper [illegible] is most timely [illegible]

[illegible]

It [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] land D[illegible]
[illegible] 28, 19[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]
November 2, 1939

[illegible]

THE LANCET

[illegible]

[illegible]

Reviews.

[illegible]

Her [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] DELINQUENCY [illegible]

[illegible]

[illegible] Sir William [illegible] K C B [illegible] London [illegible]

[illegible]

[illegible] O B E [illegible]

Mr [illegible] to be [illegible]

[illegible] Mr Gordon [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] of some of the [illegible] the volumes [illegible] Academic

[illegible] is the first [illegible] Navy, the Army [illegible] Mathematics [illegible] Zealand [illegible] Mathematics [illegible] 1928 [illegible] solve [illegible] fact the [illegible] The [illegible] and absorb [illegible] ranging from [illegible] mant mani [illegible] mology [illegible] ero [illegible]

[illegible] and the [illegible] for April [illegible]

In the chapter [illegible] the Sanitary [illegible] equally important [illegible] [illegible] [illegible]

[illegible] Walter Reed (1892 Reid) Bruce and [illegible] Wooldridge [illegible] Walter Reed [illegible] United States William Crawford [illegible] bite [illegible] through the [illegible] Johnson

[illegible] Carlos Finlay [illegible] Lesharan Nagueh Walter Reed [illegible] the Father of the Science of Tropical Medicine [illegible] among the illustrious [illegible] whose life work [illegible] These charming [illegible] are illustrated in full page [illegible] A [illegible] bibliography and adequate indices are given

[illegible] English language [illegible] judging from [illegible] quotations of classical Latin and Greek and [illegible] well His History of Tropical Medicine [illegible] be studied as monumental [illegible] as [illegible] and dealing [illegible] upon [illegible] Dr Scott and that is his reference to his work in [illegible] success is published [illegible] D Scott is fu [illegible]

F G H

[illegible] Diseases By A C Roxburgh M A M D B Ch Cantab [illegible] Physician in Charge of the Skin Department St Bartholo [illegible] 1939 [illegible] xxxiv + 1[illegible] with 8 plates [illegible] Lewis and Co [illegible]

[illegible] in diagnosis [illegible] looking them by [illegible] the phenomena of malsyphilitic teeth And in [illegible] for looking them in that of [illegible] supplied [illegible]

[illegible] Diagnosis is [illegible] it is usually called for [illegible] which [illegible] the most [illegible] of both [illegible]

[illegible] in diagnosis [illegible] philosophy [illegible] Latin [illegible] lines Latin [illegible] for [illegible] the [illegible] help [illegible] the [illegible] and the [illegible] the assistance of [illegible] is not [illegible] itself the [illegible] the most [illegible]

As [illegible] the assumption [illegible] The most tactful [illegible] the pregnant [illegible] times of [illegible] suffered by the horrid [illegible] of [illegible] He is [illegible] that something [illegible] practitioners [illegible] the appropriate [illegible] that [illegible] and strong appeal

[illegible] that it is not a complete textbook [illegible] and twenty skin diseases and [illegible] But his material is presented in the

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] 1916-17 [illegible]

[illegible]

[illegible]

[

[illegible]

News of the Service

ADMIRALTY ORDERS

1685 Discharge on Invaliding—Notation on Service Certificate

(N. P. M. 163/39—23.11.1939.)

[illegible]

Women's Royal Naval Service—Ordinary Leave and Sick Leave—Provisional Rules

(C. L. 0983/41—23.11.1939.)

[illegible]

ORDINARY LEAVE

Men [illegible] W.R.N.S. may be granted the same [illegible] and [illegible] leave [illegible] all W.R.N.S. personnel [illegible] [illegible]

[illegible] W.R.N.S. or W.R.N.S. officer in charge of the [illegible] Naval authorities under whom the officers [illegible] will be [illegible] to ensuring that the appropriate amount of [illegible]

SICK LEAVE

[illegible] Service sick leave with [illegible] maximum of six months [illegible] Service sick [illegible] officers and [illegible] [illegible] Medical [illegible] sufficient [illegible] rating [illegible]

The [illegible] allowing [illegible]

The [illegible] rest will [illegible] [illegible] Medical [illegible]

The [illegible] which [illegible] Medical [illegible] [illegible]

2654 Vaccine Lymph—Demands to be Kept Within Requirements
(M D G 10[illegible] 33 1 0 0 1 1 1 9 8 0)

In view of the [illegible] emergency it is important that [illegible] and [illegible] vaccine lymph

Demands [illegible] the Government Lymph Establishment [illegible] therefore [illegible] as possible to the quantities [illegible]

3 Supplies [illegible] should be returned [illegible] the Government Lymph [illegible] Cobbyle Avenue Hyde Park London N W

3674 Supply &c of Dentures to Sick Bay Ratings
(M D G 10[illegible] 28—1 0 0 0 0 0)

[illegible] supply of dentures [illegible] allowed [illegible] all branches [illegible] and R N R Medical [illegible]

(1) The supply is essential to [illegible] man [illegible]

(a) [illegible] Naval Medical [illegible]

(b) [illegible] Naval Medical Officer [illegible]

(c) [illegible]

(2) Dentures supplied [illegible]

(3) Ratings [illegible] Dentures [illegible] Naval Medical [illegible]

[illegible]

3110 Consul Surgeon—Arrangements for
(M D G 10[illegible] 29 1 0 0 0 0 0 0)

[illegible] Consul [illegible] Surgeon [illegible]

Bathurst W A [illegible]

Antananarivo [illegible]

Dunedin [illegible] Consul

3015 Promotion Examination for Rank of Surgeon Commander—Result
(D W 10[illegible] 0—26 10 1939)

The following officers qualified at the examination for promotion to Surgeon Commander held in July 1939

Surgeon Commander T E Barlow M R C S L R C P R N

Surgeon Commander T S Osborne L R C P & S R N

Surgeon Commander H W Coult M B B S R A N

[illegible] Lieut. C. H. Egy[illegible] M.B.E., [illegible] R.N.
[illegible] Lieut. J. C. Gill, M.B.E., [illegible] R.N.
[illegible] Hopkinson, L.M.S.S.A., [illegible] R.N.
[illegible] Lieut. J. M. Hess, M.R.C.S., L.R.C.P., D.T.M. & H., R.N.
[illegible] for meritorious promotion.

[illegible] Universal Adjustable Thomas Leg and Arm Splint
(M.D.G. 10343/39.—[illegible] 1939.)

[illegible] the name of the above splint is to be changed to the Universal Adjustable Thomas Leg and Arm Splint.

2810a.—Identification Discs—Blood Grouping
(M.D.G. 10397/39.—[illegible] 1939.)

[illegible] stamped on the identification discs should be stamped on the [illegible] the letter should be chosen from the letters O, A, B, or AB.

R.N. Medical School, Greenwich, Change of Address
(M.D.G. 11581/39.—[illegible] 1939.)

The R.N. Medical School, Greenwich, is changing its address and the [illegible] will be shortly [illegible] and [illegible] The new address is—
The Medical School,
Royal Hospital Road,
Chelsea, London, S.W.3.

2905 Dental Appliance Work—Decentralization of Laboratories
(M.D.G. 11368/39.—[illegible] 1939.)

A [illegible] has now been established at H.M. Barracks, Devonport, [illegible] Senior Dental Officer, Devonport, in the construction and repair of dental appliances, [illegible] Devonport Division serving at Home Establishments [illegible] Plymouth waters.

3188 Neil Robertson Stretchers, Pattern 175—Revised Allowance
[illegible] Cruisers of 6000 tons and [illegible] aircraft carriers
(N.S. 0915/39.—[illegible] 1939.)

The [illegible] of allowance of Neil Robertson stretchers, Pattern 175, [illegible] and over, [illegible] aircraft carriers, [illegible] 2 per [illegible]

[illegible] Lords consider that where necessary forward demands for [illegible] allowance. Any stretchers already [illegible] be retained.

[illegible] instruction and reconstruction should be made by [illegible]

H.R.H. Establishment Nov. 1 stores are by [illegible] supplies will be [illegible]

3473.—Spectacles—Supply to Ratings who do not Require to Wear them with Anti-gas Respirators
(M.D.G. 14740/39.—16.11.1939.)

Men who do not require [illegible] spectacles with the respirator anti-gas [illegible] supplied with the new Mark III pattern spectacle frame for use with respirators, anti-gas.

Such men should be supplied with [illegible] of rolled gold frames with [illegible] sales [illegible] of the pattern Mark III pattern.

The [illegible] frames are to be marked with duly qualified optic[illegible] and [illegible] Optician must certify that the prescription is in order [illegible] the prices obtainable [illegible] the distant [illegible] purchase is [illegible]

When equipment is supplied as a charge to public funds, a certificate is [illegible] medical officer [illegible]

The procedure laid down in A.F.D. 1838/39 for obtaining Mark III pattern frames [illegible] the Ministry of Economic Defence does not apply to rolled gold frames.

3435 — B.R. 143/39—The Treatment of Surgical Casualties after a Naval Action—Issue

(N. 660/39—9.11.1939.)

A pamphlet entitled "[illegible] of Surgical Casualties after a Naval Action" being published for the guidance of Medical Officers, it will be issued as B.R. 143/39. A copy of this pamphlet [illegible] to Medical Officers will be supplied on demand addressed to the R.N. Store Depot, Royal Victoria Yard, Deptford, S.E.8.

3472.—Dental Arrangements at R.N. and F.A.A. Bases

(C.W. [illegible] 10—26.11.1939.)

At bases where [illegible] dental facilities are [illegible] available, the senior Naval Officer should [illegible] temporary routine will [illegible] dental [illegible] in the [illegible] treatment of [illegible] (including [illegible]) [illegible] Naval Dental Officer [illegible] Sick [illegible] Dental [illegible] [illegible]

[illegible] these arrangements the [illegible] agent should be consulted and [illegible] should be [illegible] [illegible] be [illegible] from the [illegible] respect [illegible] with the [illegible] from S.[illegible] responsible [illegible] [illegible] of the [illegible] communicated to the Medical Officer [illegible] Navy.

[illegible] Officer [illegible] which would [illegible] [illegible] Medical [illegible] from S.[illegible] respect of [illegible] [illegible] Navy [illegible] Form M.[illegible] [illegible]

At Bases where [illegible] should be reported to the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

[illegible]

(b) [illegible] general anaesthetic a fee per [illegible] extracts [illegible]

[illegible] teeth	[illegible]	[illegible]
[illegible] eight teeth	[illegible]	[illegible]
[illegible] twelve teeth	[illegible]	[illegible]
[illegible] teeth	[illegible]	[illegible]
[illegible] teeth	[illegible]	[illegible]

[illegible] shall be payable [illegible] general anaesthetic [illegible] doctor [illegible] (other than the [illegible]) [illegible] table.

c Dentures

[illegible] tooth	1	1
[illegible] teeth	1	1
[illegible]	1	[illegible]
[illegible] teeth	1	11
[illegible]	1	[illegible]
[illegible]	[illegible]	1
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	11
[illegible]	[illegible]	1
Maximum [illegible]	[illegible]	1
Maximum [illegible]	[illegible]	11

[illegible] [illegible] work [illegible] with [illegible] under [illegible] each [illegible] of all [illegible] of [illegible] [illegible] with [illegible] raw [illegible] [illegible] plate even [illegible] teeth

[illegible]

[illegible]	[illegible]	[illegible]	1
[illegible]		11	[illegible]
[illegible]		15	[illegible]
[illegible]		7	1
[illegible]	[illegible]	1	6
[illegible]	1	[illegible]	[illegible]
[illegible]	1	[illegible]	4
[illegible]	1	10	[illegible]
[illegible]	1	14	[illegible]
[illegible]	1	16	8

[illegible] [illegible] under item

[illegible] [illegible] [illegible]

[illegible] [illegible] 6 1

[illegible] 6 1

3529.—Medical Officers' Journals Rendering

(C.W. 20878/39.—16.11.1939.)

[illegible] should [illegible] Regulations and Admiralty Instructions Article 1416 [illegible] Chapter XXXVIII especially Article 1411 [illegible] Article 1386 [illegible]

4. It is to be [illegible] reserve should be [illegible] military [illegible] and [illegible] and [illegible] and [illegible] only and [illegible] in the [illegible].

3691.—Tetanus Toxoid for Preventive Inoculation Against Infection with Tetanus Application to Certain Civilian Staff

(C.E. 16207/39.—24.11.1939.)

Civilian employees of Royal Naval [illegible] are affected precautionary [illegible] against tetanus where a Naval Medical Officer is available to give the inoculation.

Where a Naval Medical Officer is not available a civilian staff wishing to be inoculated will have to be provided by a civil practitioner [illegible] expense.

3687.—Men Wounded as a Result of War Operations—Hard Certificates

(P.M. 16116/39.—30.11.1939.)

Men wounded as a result of war operations are to be granted Hard Certificates [illegible] the special circumstances in which the injury occurred and their duty.

2. The procedure laid down in Article 1119 of the Regulations and Admiralty Instructions is to be followed as closely as practicable. Although it is recognized that the circumstances in which the injuries are sustained may [illegible] compliance with the Regulations impossible.

3742.—Disinfectant Fluid New Contract

(C.P. 6705/39.—30.11.1939.)

New contracts for Disinfectant Fluid (Cresylic) C.P. 3411/39 dated [illegible] have been placed with Messrs. Lysers Sanitary Compounds Co. Ltd. and Messrs. Cooper McDougall & Robertson Ltd. for supplies of the [illegible] gallon drums and 40 gallon drums.

All indents should be sent to Director of Naval Contracts (Stores) Admiralty, Royal Naval Barracks, Queen Road, Bell Street, for transmission to them, and the indents should be [illegible] blank and a copy [illegible] for [illegible] sent concerned, when the order has been placed.

To Home Establishments and Ships in Home Waters only.

[illegible] drums and [illegible] in view of present shortage of supplies of these articles. Only empty drums [illegible] tion should be returned. The Issuing Officer is to [illegible] *paid* to the authority from whom they were received. [illegible] Empties for Messrs. Lysers Sanitary Compounds Co. Ltd. may be sent to Admiralty Transport [illegible] Royal Victoria Yard. Empties should be returned [illegible] by them either to Chatham, Marchwood or [illegible].

[illegible] drums originally drawn [illegible] to the nearest R.N. Hospital.

5. Amounts to be recovered for certificates in respect of empty drums returned carriage paid [illegible] are as follows:—

	1 gallon drums	40 gallon drums
Lysers Sanitary Compounds Co. Ltd.	8d.	1s.
Cooper McDougall & Robertson Ltd.	9d.	No [illegible]

[illegible] Blane Medal for Medical Officers R.N., 1940—REPORTS.

(C.W. 33515/39.—7.12.1939.)

[illegible] Blane Medal for 1940 under the regulations promulgated [illegible] considered as a result of reports forwarded by the Medical [illegible] with that Order.

[illegible] Admiralty [illegible] Kinton for the award—which will reach the Medical Department [illegible] 1940 containing information of work done and suggestions [illegible]

1897.—Fleet Air Arm—Medical Instructions

(M.D.G. 3897/39.—7.12.1939.)

[illegible] instructions concerning medical arrangements at Fleet Air Arm [illegible] for [illegible] which for this purpose shall be deemed to [illegible]

[illegible]

SECTION I.

[illegible] will consist of—

[illegible] Women's Medical Officers for Flying Fields (R.N. and R.M.).

[illegible] Women's Medical Officers for Flying Officers (R.N. and W.M.).

[illegible] R.N. and R.N.V.R. (excluding those attached for [illegible])

[illegible] of the Fleet Air Arm. [illegible] medical examination for flying, medical category [illegible]

[illegible] All Flying Personnel will be [illegible] for duty [illegible] shall exercise [illegible] for flying as [illegible] Officers in Rating [illegible] Air Group [illegible] will be [illegible] for the purpose. Very [illegible] for the next Annual Medical Examination [illegible] 1939). The results of the examination [illegible] M.248 (Medical Form M.248 (continuation form)) [illegible] forwarded through Rear-Admiral, Naval Air Stations, [illegible] M.S. [illegible] will be the Medical Officer of the Unit.

[illegible] all Flying Personnel will be [illegible] Training Establishment [illegible] and ground duties will be [illegible] will be following procedure:—

[illegible] Fit as for Air Duties. [illegible] Ground Duties.

[illegible] the latter [illegible] to decide the type [illegible]

[illegible] flying).

[illegible] Medical Board [illegible]

[illegible] shall be both as regards [illegible] day [illegible]

[illegible] shall be limited on medically unfit [illegible] with [illegible] pilot.

[illegible] will be noted on the form.

[illegible]

[illegible]

[illegible]

[illegible] ordered to the Medical Officer [illegible] Special Board shall be made [illegible] (Art. 1112 C)

When a Special Medical [illegible] is the Admiralty, Medical Branch [illegible] the applicants to the Director of Naval Medical Service [illegible] Naval Medical [illegible]

When [illegible] by Medical Examiners [illegible] medical [illegible]

A. [illegible] (Pamphlet M. 43, M.248.)

All Physical [illegible] Medical Examiners

(1) [illegible] Examiner [illegible] through the Medical Officer [illegible] by the necessary approval [illegible] is to be made for the examination [illegible]

[illegible] accordance with instructions [illegible] when application is by [illegible]

[illegible] R.A.F. Command Headquarters [illegible]

(2) [illegible] Medical Board [illegible] between May 1 [illegible] and April 30 [illegible] Medical Examiner [illegible] but when [illegible] the medical [illegible] stated that they [illegible] the Medical Officer [illegible] previous medical [illegible] to Rear Admiral [illegible]

B. [illegible] (Pamphlet M. 90)

Medical [illegible] on the following [illegible]

[illegible] shock [illegible] after a period [illegible] to [illegible] [illegible] long [illegible] to [illegible] [illegible] Medical [illegible] Royal Naval Reserve.

(3) *Special Medical* [illegible] (Pamphlet M.2, M.250, M. [illegible]) [illegible] examined by a Medical Board [illegible]

(4) When [illegible] Medical [illegible] medical [illegible]

[illegible]

(4) [illegible] Medical [illegible] be an [illegible]

(3) [illegible] necessary [illegible]

(2) [illegible]

(1) [illegible]

(5) *Int*[illegible] [illegible] ship may [illegible] AVR [illegible] AVR

When [illegible] Medical [illegible] Admiralty [illegible] from M 250 [illegible]

(6) *Adm*[illegible] [illegible] Admiral [illegible]

(6) *Regul*[illegible] *Medical* [illegible] that a case should be [illegible] such that regul[illegible] the usual [illegible]

All medical [illegible]

[illegible] Medical [illegible] [illegible] with King's Regulations [illegible] Admiralty [illegible] M 250 [illegible] Medical [illegible] [illegible] M 250 [illegible]

A regul[illegible] M 3 [illegible] and others [illegible] and [illegible] M 3 [illegible]

When [illegible] Medical [illegible] [illegible] Medical [illegible] [illegible] Officer [illegible] [illegible] [illegible]

[illegible]

[illegible]

The following forms [illegible] —

Form	Occasion for Use	Method of Completion	[illegible]
M 248 (R A F 20) (Card and flimsy) Hospital sick leave record	On disposal of patient [illegible] duty to hospital [illegible] validating sick leave	Card and flimsy to be completed and signed by the Medical Officer	Flimsy to be [illegible] annotated [illegible] Medical Director [illegible]
M [illegible] (R A F 48) Medical History Envelope	To contain all flimsy [illegible] of medical forms	Initialled by Medical Director General on officers attaining being found fit for [illegible] Annotations are to be made when [illegible] are added. On appointment [illegible] charts are to be completed as soon as possible by a Dental Officer	*On [illegible] appointment* [illegible] To Commanding Officer [illegible] Medical [illegible] *On [illegible]* [illegible] *From an [illegible] another [illegible]* [illegible] *From a Ship [illegible] Ship or Establishment* [illegible] *On admission to Sick Quarters* [illegible] Medical Officer [illegible] *On admission to a Civil Hospital* [illegible]

[illegible]

[illegible] *On [illegible] discharge to duty* — To Commanding Officer [illegible] Medical Officer of H M ship or [illegible] *[illegible] to [illegible] Medical Officer [illegible] Medical Director General Admiralty* [illegible] Admiralty accompanied [illegible] Medical Director General [illegible] R A F [illegible]

Original medical [illegible] living and [illegible] only)

[illegible] Medical Officer

[illegible] Medical Board [illegible]

		Medical		
		Medical		
[illegible]	[illegible]	[illegible] forward [illegible] full description of d[illegible]	[illegible]	
[illegible]	[illegible]	Do		
[illegible]	(1) For all Flying Personnel or those on a Medical Board [illegible] has been held (2) For all Serving R.N and R.M candidates at the final medical examination for fitness for flying	[illegible] in duplicate To be signed by Member of the Board and counter signed by the individual to whom it refers	[illegible] Director General of the Medical Board	
M 255 (R.A.F 826) (card and [illegible] only)	For final medical examination to ascertain fitness for service	For use of final medical examining Board only	Flying [illegible] copy to be forwarded to the Medical Director General direct	
M 256 (R.A.F 827) Manuscript notes for completion of Form M 255 (R.A.F 826)	Do	Do	Retained as Board copy	

[illegible]

[illegible]

[illegible]

[illegible]

Type of Examination	Pilots	Observers and Air Gunners
Physical Examination	Full examination and medical standard as laid down in A P 130	Full medical examination and medical standard as for Pilots except that test for Leg Length That will be omitted
Eye Examination	Full examination as laid down in A P 130	Examination as for Pilots except that tests for visual judgment (jocular muscle balance) will not be done
	Visual Standard — (a) *Distant* 6/9 6/9 each eye tested separately Year D = 0 (each eye tested separately without glasses Manifest hypermetropia exceeding 2 5 D (each eye being tested separately and then together) is not permitted even if the visual acuity is normal Myopia is a cause for rejection if it is considered to be progressive Hypermetropia even when the acuity is within the prescribed limits A candidate need not present an error of more than plus or minus 2 5 D Cyl even if visual acuity is within the limits prescribed (b) Colour Test as Grade I (*see* Note 1)	Visual Standard — As for Pilots (*see* Note 1)
	(c) *Standard for assessment of visual judgment* as shown in A P 130 Part II Chapter 9 Table II	Not applicable
Ear Nose and Throat Examination	Full examination and standards as laid down in A P 130	As for Pilots

Note 1 *Colour Vision* will be recorded *Grade I II or III* The grading full particulars of which are to be found in the Medical Research Council's Special Reports Series 185 is briefly as follows

Grade I Candidates are required to pass the complete Edridge Green Lantern test using the largest aperture No 3 The largest aperture is No 1

Grade II Candidates are required to pass a modified Edridge Green Lantern test using the second aperture without neutral or modifying glasses Sufficient colours must be shown to ensure that the candidate can differentiate between Red Sig 1 Green and White without grouping

Grade III As for Grade II using No 1 aperture (the largest)

Note 2 Non Commissioned Grade I corresponds approximately to the R A F Class Medical of Flying Art 1 and Colour Definition Sub Grade A P 129

Note 3 *Eyesight* Pilots will be examined on both the Ishihara Plates and the Edridge Green Lantern (full test)

[illegible]

1918—Lookouts Selection Training and Employment

[illegible]

1 General

[illegible]

2 [illegible]

3 Lookout [illegible] following [illegible]

(a) [illegible]

(b) [illegible]

(c) [illegible]

(d) [illegible]

(e) [illegible]

(f) [illegible]

(g) [illegible]

[illegible]

Lookouts [illegible]

[illegible]

[illegible]

[illegible]

[illegible] light and [illegible] slightly to [illegible] in places [illegible] [illegible] [illegible]

[illegible]

[illegible] many [illegible] light [illegible] or [illegible]

[illegible]

[illegible] these [illegible] to have [illegible] fog, and so readily [illegible] pieces [illegible] from fatigue [illegible] [illegible] there is sunlight [illegible]

[illegible] is the look [illegible] taken [illegible] adequately clothed

22 P[illegible] lookout position [illegible] the angle of sight

23 Wh[illegible] work [illegible] as follows

(a) [illegible]
(b) Height [illegible]
(c) Sh[illegible]
(d) [illegible]
(e) Supp[illegible]
(f) Sight [illegible] ship b[illegible] When [illegible] so low th[illegible]

Experience [illegible] in heavy weather [illegible] position has [illegible]

24 It [illegible] provided the [illegible] these are

25 In [illegible] where this [illegible] should result in [illegible] ments for lookout [illegible]

IV.—In[illegible]

27 A A. [illegible] stationed [illegible] view overhead. They should work in [illegible] During this [illegible] the [illegible] lum. *Once* [illegible] *A D O has fixed* [illegible] and angle of sight

28 Lookouts [illegible] 60° to 120° and [illegible]

29 A A. Look out s[illegible]
(i) Sweep th[illegible] taken [illegible]
(ii) As above [illegible]
(iii) As abo[illegible]
(iv) As above [illegible]
(v) With [illegible] 20 [illegible]
(vi) With binoc[illegible]

30 *For Lookouts* [illegible] sweep their arc back [illegible] above the horizon [illegible] the [illegible] torpedoes [illegible]

31 *Subsurface* [illegible] bridge. When allocating [illegible] are the [illegible] will probably be [illegible] (Recent experience has shown [illegible] minutes.)

If the ship is [illegible] strips until [illegible] method in all [illegible]

OBITUARY

[illegible]

[illegible]

[illegible]

DEGREES AND DIPLOMAS

[illegible]

QUEEN ALEXANDRA'S ROYAL NAVAL NURSING SERVICE

[illegible]

Notice

TABLOID THROBA

[illegible]

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Journal

of the

Royal Naval Medical Service.

Articles

JOHN WOODALL, SURGEON, ROYAL NAVY (1569-1643)

CHRISTOPHER J. S. DUNN, COMMISSIONER, JUNKINSON, R.N.

PART I

I have the works of this excellent surgeon, the following, collected his life, he collected.

John Woodall was the last of a handful of great English surgeons, practised some, trained in a rough school on land or sea. He was the link by which the great traditions of Elizabethan surgery were transmitted to the surgeons of the Commonwealth and Restoration, in addition which about [illegible] surgery to become a profession instead of a trade. The Elizabethan surgeon tried to educate apprentices and practitioners alike in the rudiments of practical anatomy and of surgery. Their round of the tender of surgery with medicine, from which it had been detached [illegible], and they endeavoured to put down quackery and [illegible] when practised incompetently. In this [illegible] Woodall said with much truth: "[illegible] surgeon, from Nature hath published and book [illegible] to teach the younger sort, these our mean notes [illegible] expected." and Woodall twenty years after his death in [illegible] Barbers and Chirurgeons, he was [illegible] in his [illegible] the [illegible].

Born about 1569, he was the son of Richard Woodall of Warwick and Mary his wife, the daughter of Peter Jethell of North Wales. By a happy chance, G. Dunn, a member of the Barber Surgeons Company, [illegible] to recommend his friends book, [illegible] details of his life, which [illegible] otherwise have been [illegible]. We [illegible]

[illegible] then he went over in France as a military surgeon to Lord Willoughby's regiment in the troops sent by Queen Elizabeth to the assistance of Henry IV. He seems not to have returned at the expiration of his service, for he had him after this period travelling through France, Germany and Poland in which countries he says for want of better and more benefitable employment he was forced to practice in the cure of the Plague. From [illegible] he says that he had himself suffered twice. He acted afterwards as surgeon to the colony of English merchants at Strodda near Posen on the Polish frontier and was employed by some ambassadors sent to that place by Elizabeth as their interpreter in the German language. On his return to England after the death of the Queen he settled in London and residing in Wood Street made use of his former experience in a close attendance on the sick during the Great Plague of 1603. I left not the City when the disease was in the highest neither then did I doubt to visit and cure any that had any help and ever since in some sort I have been helpful to the curing thereof.

He became a member of the Surgeons Company and about the year 1612 was elected Surgeon to St Bartholomew's Hospital and in his treatise he gives some of his numerous several cases which came under his treatment there. Among others "a certain poor maid or woman called Ellen French who was sorely pilfered and being accused thereof by her master and mistress cursed and swore and with words of execration to wish that if she had committed the crime she stood accused of that then her legs and hands might rot off the which thing accordingly no doubt by the Divine Providence God effected pus is a judgement upon her namely that both her legs and hands in the gangrening place with parts of seven of her fingers did rot off and fall from her nevertheless being referred to me in Saint Bartholomew's Hospital I by God's mercy and permission I healed the parts by cutting off both the sphacelated legs in the mortified parts and so she lived. The seventh day I did in the morning without pain terror or [illegible] I dressed her in the taking them off and made her perfectly whole and sound within three months so merciful is our God to us when we are most unworthy of such his mercies. She [illegible] to be still living."

He was appointed the first Surgeon General to the East India Company when it was formed in 1600 upon stock business in 1612. This appointment he resigned to Sir Thomas Smith Governor of the East India Company to whom he dedicated the first edition of The Surgeons Mate published in 1617. The dedication runs "To the Right renowned vertuous and worthy Knight Sir Thomas Smith Governor of the East India Company my singular good Patron." To the dedication a portrait and autograph signa

[illegible] S. [illegible] S[illegible] practised [illegible] trust and consequence since he had the charge of [illegible] and mates to all the Company's ships and furnishing them [illegible] and every other necessary article. It was on this [illegible] Surgeon's Mate." It cannot be doubted from many circumstances that he was for some considerable time a sea surgeon and made [illegible] voyages to the East Indies in that capacity but at what period [illegible] this happened cannot from his works be ascertained. As he mentions [illegible] eight years for the term of his travels by land a period of three [illegible] years will be left to complete the time between his first going to France and his return to England after the death of Queen Elizabeth and this must probably have been spent in the naval service. We are informed that he was likewise sent into Poland on some business of importance to the State in King James reign. According to his eulogist he

> was in Parliament sent
> There to negotiate business of a moment
> Touching the Commonwealth. And for the space
> Of three and twenty years enjoyed the place
> Of Surgeon General to the East Indies
> And Hospital of Bartholomew likewise.

In 1626 he was ordered to go to Portsmouth to attend the wounded from the Rochelle expedition and when the naval forces of the Kingdom were augmented and warlike preparations were carried on with vigour the charge of fitting out the chirurgical part of His Majesty's Service was committed to the Corporation of Surgeons and by them to Woodall. The King Charles I on this occasion augmented the pay of the navy surgeons and gave them [illegible] proportioned to the rates of the ships towards furnishing the medical chest.

In 1633 he served the office of Master of the Barber Surgeons Company. In 1641 he was appointed Examiner of Surgeons for the Service and in September 1643 died leaving three sons and one daughter by his wife Sara Henchpile.

Woodall dedicates his works to the King the Governor and Committee of the East India Company. In his epistle to the latter he asserts that for forty years past no English surgeon but himself had published any book of the true practice of surgery for the benefit of young practitioners. He gives a kind of short history of medicine which shows how it has been cultivated reading and he adds a sensible and modest defence of surgeons prescribing diet and medicines to their patients in certain cases urging that as they are liable to be called upon to serve their country in surgeries where the whole medical treatment must be entrusted to them it is unreasonable to deny them in private practice the exercise of such knowledge as they are allowed to possess.

[illegible] Literary reputation [illegible] their chief works (1) The [illegible] published in quarto in 1617 [illegible] 45 pages It governed the [illegible] in hospital ships [illegible] and was the official [illegible] in naval surgery [illegible] carry with him on voyages [illegible] Its general plan is first [illegible] the [illegible] 'artificiall' antidotes of a Surgeon's [illegible] and then certain [illegible] of [illegible] parts of military and [illegible] He [illegible] and is executed [illegible] the matter is chiefly accom[illegible] [illegible] only like unto of some of the [illegible] (Aikin)

[illegible] instruments he mentions one of his own invention [illegible] Also [illegible] contrived for the removal of hardened faeces [illegible] and he has several good observations on the frequency [illegible] He also affirms a submucosal introduction describes [illegible] the smoke of tobacco or other substances up [illegible] which as it would seem was likewise his own In [illegible] he falls into the bad practice of the time in [illegible] abundant applications to abbreviate the supposed tedium [illegible] and what is extraordinary he does not once take [illegible] of Christ William Clowes AD 1540-1604) express treatise on the [illegible] Indeed [illegible] so liberal of compliment to his country [illegible] and contemporaries is that author very seldom even mentioning their [illegible] In opening abscesses he greatly prefers caustics to the knife and [illegible] the exclusive use of irritant and corrosive applications in the time [illegible] He does not allow the use of circular tollers in fractures the [illegible] which would distend the limb but in their stead directs splints [illegible] He speaks much against tight bandage strongly incidentes the [illegible] of fractures is the work of nature and indeed treats this [illegible] he may readily believe his assertion that what he [illegible] from his own experience not from the authority of others [illegible] recommends tying the large vessels especially those of the [illegible] be done but he seems to think the surgeon will often be baffled [illegible] In this case as well as for the smaller vessels he directs [illegible] caustic powders be applied The most valuable piece of his [illegible] which he is now chiefly remembered seems to be his treatise on the [illegible] whether for accuracy to describing the disease or judiciousness [illegible] has perhaps scarcely since been excelled He defines [illegible] disease of the spleen and affirms its principal cause to be [illegible] with permission together with the name of cleanliness and

[illegible] change of apparel He describes the symptoms concisely [illegible] with precision and then proceeds to the practical part in which he [illegible] full and particular The remedy to which he gives the first place [illegible] Lemons the extraordinary efficacy of which he several times [illegible] in spite of this he recommends various other vegetable juices [illegible] and where none of these can be had oil of vitriol He writes "The [illegible] called in Latine Scorbutum that lamentable disease which hath [illegible] so heavily assailed Saylers and Seamen of all sorts more than [illegible]

In advocating the use of lemon juice his medical acuteness "The [illegible] following his bleeding if he can bear it and if then his disease [illegible] swelling or fulness give him a dose of the pills of Euphorbium [illegible] Camblogia and make him some comfortable spiceing meate [illegible] make at sea namely an Oatmeal candle would not be amiss [illegible] or wine with the yolke of an egge and a little sugar made warm [illegible] him to drink or any comfortable broth made with herbs and [illegible] or spices moderately taken or with sugar or as the ship can afford [illegible] Water for his ordinary drink were not amiss with some few drops of [illegible] mon water therein and also some juyce or Syrup of Limons therein [illegible] drops of oyle of Vitriol and some sugar and give him in his drinke by way of infusion dried Wormwood good store for it is very wholesome

Further the Chirurgion or his Mate must not fail to persuade the Governor or Purser in all places where they touch in the Indies and [illegible] have it to provide themselves of juice of Oranges Limes or Lemons [illegible] at Bantham of Tamarinds Also sometime though [illegible] comfortable candle made with some wine spices sugar and the yolke of an egge were very good for these are helps in that case as well to prevent the disease as also to helpe it when it comes The use of the juyce of Lemons [illegible] precious medicine and well tried being sugred and good It is to be taken each morning two or three spoonfuls and [illegible] after it for nine hours and [illegible] you add nine spoonfull of Aqua Vitæ therein to [illegible] stomach [illegible] better Some Chirurgeons also give of this juyce daily to the men in health as a preservative which course is good if they have store otherwise it [illegible] best to keep it for need I dare not write how good a sauce it is [illegible] least the chiefe (chief) in the ships was it in the great Cabbins [illegible] vinegar

A quantity of judicious remarks and directions concerning medicines diet and external applications occur in this treatise of which I shall only say further that they appear evidently to be the result of experience and careful observation and are in great part confirmed by modern practice

The Surgeons Mate ends with the epilogue "Gentle reade I had intended much more in my love to a young man to have written but [illegible]

[illegible] But time hath overtaken me so that now I am forced to pause [illegible] to see what acceptance this first part hath in the world and [illegible] I will haste to the next Thus in the Lord I W

[illegible] second edition in folio and much enlarged was published in 1639 [illegible] third title "The Surgeon's Mate or Military and Domestique [illegible]

Woodall's other works are (2) The Viaticum being the pathway to the Surgeon's Chest written in 1626 and published by authority in 1628 A [illegible] and enlarged version was issued in 1639

A treatise on the Plague first published in 1639 The fourth edition [illegible] in 1655

(3) A Treatise of Gangrene and Sphacelus but chiefly for the amputating [illegible] cutting of any member in the mortified part London 1639

(4) [illegible] works The Surgeon's Mate "is the most ambitious the Viaticum [illegible] interesting and the treatise on amputation the most valuable [illegible] practised surgical practice throughout the country for many years [illegible] there is a pot boiler recommending a cordial powder made of [illegible] called by him aurum vitæ whereon by God's meteie the Patient [illegible] upon a safe antidote

Woodall's treatise entitled "Viaticum" is a kind of Appendix to his [illegible] work for the instruction of the younger surgeons

"The Viaticum being the Pathway to the Surgeon's Chest" is intended [illegible] for the better curing of wounds made by gunshot Woodall sums [illegible] experience in a series of pithy sentences from which the following [illegible] selected

[illegible] are very good medicines in Wounds with Gunshot Foment [illegible] long at any one time

[illegible] all your vehicles for your medicines as tents dossells &c be soft [illegible] pleasing to your patients and cram not the wound too full at any time

[illegible] wound of gunshot can be said to be a simple wound neither was there [illegible] any artist that could truly say he healed any gunshot wound by the [illegible] medicium

In distributing blistering or other apparent shews of a Gangrene apparent [illegible] the patient a Diaphorene cordial then scarify gently at first and have [illegible] a lixivium made of water and ashes in the height of an ordinary lee [illegible] women use to drive bucks with (soap suds that women wash clothes with) [illegible] put a reasonable quantity of common salt into it or use salt water [illegible] fomentation (In other words Woodall recommends the use of salt [illegible] it is now newly recommended to be employed)

Immediate amputation is advised when this operation is considered necessary [illegible] the bleeding being arrested by the actual cautery for seldom or never

can you make ligature of the artery or veins in a g[illegible] Also he hath Landanum which may safely give 5 or 4 grains to [illegible] ease pain in painful wounds

Woodall also describes the midwife trephine worked by hand and with a removable centre pin. This instrument being of my own composing is more compendious and of more facility than is the Trepan, which had no centre pin and was worked by a brace one end of which rested against the surgeon's breast

The Viaticum was written in 1626 and printed first in 1628. From this period we learn scarcely anything concerning him except that he was for a time master of the Surgeon's Company and that he reached his sixty ninth year in 1638 when he collected all his works into one volume printed in 1639, which besides his "Surgeon's Mate" and Viaticum contained a Treatise on the Plague and another on Gangrene and Sphacelus. At this period he complains that his sight was weakened so that he was incapable of writing all that he intended. He felt the sadness of age upon him and the epilogue to the second edition of "The Surgeon's Mate" differs from that of the first in the following words "Gentle Reader I had intended much more in my love to young men to have written by way of instruction But time hath overtaken me so that now I am forced to conclude having run through the cares of sixty nine years old age being an enemy to study for my sight being weakened my memory much impaired and my capacity utterly unable to performe so had a taske I rest ready to doe good so long as the Almighty pleaseth willing to be thine in the Lord I W

REFERENCES

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British Journal of Surgery Vol IV

ACKNOWLEDGMENTS

(1) to Royal College of Physicians Edinburgh for permission to peruse and quote from "Biographical Memoirs of Medicine in Great Britain" by John Aiken MDCCLXXX
(2) John Wright & Sons Publishers *The British Journal of Surgery* for permission to quote from "John Woodall 1569 1643"

PART II

PREFACE TO "THE SURGEON'S MATE" (Published 1693)

By JOHN WOODALL *Master in Surgery Surgeon General to East India Company*

(N.B. The spelling in the Preface has been somewhat modernized)

THE OFFICE AND DUTIES OF THE SURGEON'S MATE

Having an intent to set downe Instructions for Surgeons Mates out of my love for them I thought it meet in a word or two to put them in mind first

[illegible] The office and duty of a Surgeon's Mate may [illegible] in three points, of which the first concerneth his duty to God [illegible] and scilicet is the searcher of the heart and [illegible] knights long before whom if he and I have the grace [illegible] hearts and fear he will direct our ways aright.

The second duty of the Surgeon's Mate is concerning the Chief Surgeon [illegible] that he must be careful to behave himself wisely, lovingly and [illegible] and in many respects he is obliged to his Mate as the wife to her husband, for he ought to be in him in every point ready to obey his reason and [illegible] all I mean only in things concerning his calling, diligent, willing, careful, secret and loving, yea, and to shew his love in covering his Master's sickness. He ought also to be gentle and kind in speech and actions towards all, pitiful to them that are diseased, and diligent in ministering to them such fitting remedies as he shall receive or be directed to give from his mate, but none without his order, for that his Mate's order I mean the Surgeon's order, is his discharge or warrant whatever happen, yet let him quietly lend his best advice to his Mate, the prime Surgeon, upon every needful occasion, kindly, submissively and lovingly, even as under correction lest, if comparisons, or oppositions take place betwixt them, it is not only [illegible] of all the Ships Company, but also a disgrace to themselves and [illegible] should in their calling, for avoiding which it is fit that the younger [illegible] the elder, and beware of the contrary, lest it be repented too late. [illegible] Masters, so I advise Surgeons, Mates [illegible] like unkind Surgeons, for it sheweth no excellent thing in [illegible] place, an honest quiet man, but to live in love with an [illegible] otherwise a unkind vicious man, sheweth wisdom in the sufferer. [illegible] stand upon this point, but that my experience hath known too many [illegible] hath caused by the dissensions of the Surgeon and his Mate, in long voyages, the which with discretion and love might have been prevented, if [illegible] of them hath had been wise. The Surgeon's Mate [illegible] visit the cabins of men, to see who hath any sickness or [illegible] ready against occasion, Lint made plasters, spread [illegible] needles prepared for flitching wounds, rowlers and boulsters [illegible] tapes, pledgents, tape, rowling, needles, and thread prepared, and all other needful thing for his calling, ready in their cases [illegible] for his most reasons he. Likewise his care must be to keep [illegible] of the chest and of his own box, clean from rusting and [illegible] barbers and razors as oft as need is. It may be he will say in [illegible] belonging to mere barbers and grinders. I cover [illegible] &c. But let me friendly tell the Surgeon's Mate, it is [illegible] are to take them smoothly and oftly, as also to

[illegible] and to be [illegible] [illegible] and [illegible] although he [illegible]

Thirdly, [illegible] hazarderth his life. [illegible] chief gain he can [illegible] let him consider itself [illegible] namely by observing the [illegible] passages of [illegible] both when they began to be sick as near as [illegible] what hath been applied either unwillingly or [illegible] medicine had and so did carry the sick [illegible] and to keep a journal in writing of the [illegible] kind and that as well of the unsuccessful applications [illegible] he shall find great benefit in both. [illegible] he hindereth in each medicine and other medicines kept [illegible] and what perish soonest [illegible] is well as the Tisanne is prime medicines. [illegible] Mate were careful in these points. [illegible] read much. I mean in Chirurgery and Physick [illegible] bear in mind what he reads that [illegible] may again find the thing he [illegible] otherwise what use hath a man of reading [illegible] Surgeon's Mate spend his time [illegible] service to God his country and himself and the benefit [illegible] God's further preferment credit and reputation in [illegible] thereby which will bring [illegible] grant for his mercy sake. And [illegible] Treatise wholly to the Surgeon's Mate [illegible] young Sea Surgeon himself in mind [illegible] some errors too gross which I have [illegible] some that he might avoid the like in himself.

The first error some young Surgeons are [illegible] others grant is the name of the [illegible] Mates is very infectious and this begeth [illegible] of the Almighty a general distrust and [illegible] kind. [illegible] for all unprofitable idle and unseemly [illegible] any good thing either in their callings or elsewhere. And if they [illegible] be anything it is in [illegible] other men [illegible] things but not perfecting their own [illegible] Being [illegible] dedicated in the Pen and Tobacco pipe [illegible] that thereby they become in themselves [illegible] spring crime and [illegible]

[illegible] from their not instructing them at all in their [illegible] more free subject in their Masters [illegible] Also of a partial basic disposition commanding [illegible] to do their [illegible] business when indeed them [illegible] even in those parts of Surgery which they [illegible] painfull diseases of poor men require the [illegible] Surgeon [illegible] For example the ulceration and sliding down [illegible] which some in disdaining to do their office of lament [illegible] and restoring thereof to the due place most inhumanly have [illegible] when with as good a conscience they might have cut their Patient [illegible] and the same I say to him that is negligent and suffereth such [illegible] in their infirmities without doing his utmost diligence I could [illegible] some of the parties who have much disgraced themselves and the noble [illegible] but I will be charitable hoping they will amend

THYNE I W

THE CASUALTIES OF WAR

By Surgeon Commander T N D'Arcy R.N.

Much has been written during the last few years on the medical aspects [illegible] and it is with some diffidence that I venture to add to the [illegible] amount of literature on this subject My only excuse is [illegible] little or nothing has been heard of the problems confronting [illegible] men who have to deal with casualties occurring at sea whether [illegible] caused by aerial bomb torpedo or mine The results of naval gun [illegible] already been described and most interesting articles on this subject [illegible] flash and cordite fire have contributed by Stephens [illegible] medical history of the last war

[illegible] stresses the great importance of early treatment of [illegible] wounded case The more likely the wound is to become [illegible] the greater is the urgency In large ships of war if the medical [illegible] are out of the action more or less intact much good work can be done but in the smaller class of ship from the cruiser downwards [illegible] more than an attempted first aid can be attempted even if there are [illegible] officers left to deal with the situation If a wound cannot be dealt [illegible] proper and final surgical manner then it should be left alone except [illegible] temporary and urgent measures which one is compelled to [illegible] the immediate saving of life It is fortunate indeed that at sea [illegible] experience such gross contamination of wounds as is the inevitable [illegible] further shame I have never seen a case of tetanus resulting from [illegible] in a small shipboard ship but doubtless an odd case may occur

A moment's thought will make it clear why naval facilities in the smaller ships cannot receive that early and thorough surgical treatment which is so much to be desired. Wounded men after receiving first aid treatment cannot be left on the upper deck of a warship, especially in cold weather. There may be no hospital ship in the vicinity, the weather may be so rough as to prevent any attempt at passing them to another ship, and the ship is probably herself so wounded that her speed is materially diminished. A long trip to harbour follows, and then the complicated business of disembarking the wounded begins. The black out adds to all the other difficulties. If the casualties are numerous there will not be a sufficiency of cots, and wounded men must be man handled carefully along mess-decks and up ladders before they can be cotted, and taken to an ambulance or hospital boat. If a hospital boat is employed, a further transference to ambulance will be necessary in most cases before they finally reach hospital. Shock and distress are an inevitable concomitant, no matter how perfect the organization is, and in spite of the greatest gentleness and care.

This description is no exaggeration, and rather underestimates the case. For instance, a small ship was recently bombed, and had a large proportion of her medical staff killed. The surviving medical officer was compelled to work by himself under the most difficult circumstances, and had many serious cases to deal with. That the great majority of them reached hospital alive, and with good notes on their casualty labels, is in itself a remarkable testimony to his skill and thoroughness. Anyone who has had to compete with numbers of wounded after action in a small ship will sympathize with the medical officer placed in a similar position. A feeling almost of panic overtakes one, and the question how and where to begin is not easily settled. Lights are out, wounded are crawling about in dark corners, cries for help come from the bottoms of ladders, where twisted and torn metal make investigations terribly difficult, and urgent requests for the doctor arrive from several parts of the ship at the same time. These are some of the difficulties which make one's medical training a handicap rather than an asset. How can one remain calm in such an atmosphere? Everyone wants help at once, and much time is wasted in deciding who needs it most.

In an action such as this it is impossible to say when the wounded will come to the operating table, because so many factors are involved. In the case of one such ship it was almost five hours before the first casualty was ready for operation, in spite of the fact that the action took place only a few miles away from a Naval hospital. By the time the last case had received attention many more hours had elapsed.

On the receipt of information that casualties are to be expected, one usually knows roughly the number of seriously wounded, though experience shows that many more than the official number continue to trickle in, some

walking, unless [illegible] their messmates. Experience has also taught us that one cannot hope to examine and discharge these seemingly slightly wounded especially if the wound is situated in the head or over one of the large body cavities. In spite stress of dealing with men obviously hard hit, one is greatly tempted to regard a small scalp wound as a trivial affair to be patched up and applied dressing and then to discharge him back to his ship. In recent instances of such cases subsequent skiagrams revealed comminuted fractures of the skull with retained bomb or ship fragments, in which case the flesh wound was very small and hard closed over. Careful examination and the patient maintained that he felt perfectly well, is anxious to get out of hospital. Large numbers of metal fragments have been extracted from various parts of the body following a bomb or shell on a ship, and it has not yet been established whether these fragments come from the bomb casing or from the splintered metal of the ship. Recent experience has shown that the entrance wound may be very small and up to inches from the missile gained admission through such an opening. The majority of such foreign bodies are retained and their location is very difficult without the aid of X rays. In view of these facts the treatment of wounds is rendered most difficult, for it is obviously impossible to subject every patient to X ray examination before operating. Several apparently superficial wounds have been laid widely open and all damaged tissue removed, only to discover some days later that a piece of metal is lying unhabited in an inches within the soft structures and sometimes about a foot away—these cases invariably become septic. Contrary to what is generally stated it is not possible to detect damaged muscle in all cases and so track a missile to its resting place—at any rate it is not possible to do so in those cases resulting from a bombing attack on a ship. Possibly the protection of the ship itself stems the momentum of flying fragments and prevents that terrible destruction described by Trueta and others. Another peculiar occurrence has been noted in casualties sustained in a bombing raid namely the presence of scalp wounds in those wearing steel helmets. Many of these men could not account for this and said that the helmet had not been damaged. It is possible of course that the helmet was being worn in a tilted position at the time. In practically all the wounds encountered the direction of the missile was from below upwards.

Before the receipt of casualties in hospital the number of which is roughly known for some time previously all walking cases are moved to the upper floors so that the ground floor which is better protected against possible attack may be prepared for the wounded. These may be expected to arrive in varying degrees of pain and shock. Beds are prepared and are equipped with hot water bottles as can be mustered. Supplies of hot drinks, soup, tea, coffee, cocoa and even cigarettes are got ready in the wards.

[illegible] the [illegible] with the [illegible] hemorrhage, [illegible] infusion and blood transfusion [illegible]. A [illegible] applied to the theatre as well as to the wards. [illegible] 3000 units of antitoxin [illegible] a kind of greater penetrating [illegible] administer 4000 to 8000 units [illegible] muscle has been injured or [illegible] wonders whether this is necessary [illegible] hesitates to take the risk of a fatal [illegible].

On the arrival of the wounded [illegible] immediately put to bed [illegible] possible and here the cigarette is also [illegible] is sought for before anything else [illegible] shock, all interest and even life [illegible] examines each case and his assistant [illegible] is duly filled and adds such notes to the [illegible] If the patient is in pain additional morphine [illegible] and the injection should be repeated [illegible] suffering—no notice of previous amount [illegible] ice cut for the correct amount is that repeated [illegible] and usual.

It is only when the surgeon has gone [illegible] hope to rarely that most difficult decision [illegible] amputation most urgently [illegible] is beyond hope [illegible] knows well that he has spent precious time [illegible] more by his compassion than by his scientific [illegible] usually [illegible] and which he undoubtedly [illegible] is always in the back [illegible] and the [illegible] burn.

Blood grouping is carried out when [illegible] fusions begun as soon as possible [illegible] Certain personal opinions [illegible] in general there is delay in [illegible] blood.

He drinks [illegible] those who [illegible] perpetuating their condition painfully when [illegible] relief [illegible]. Anti-tetanic serum is [illegible] and [illegible] Lugol's iodine [illegible] small.

During all this time while shock [illegible] seven or eleven months [illegible] which the cases are to be taken to the theatre. [illegible] death [illegible] doubtful [illegible] and [illegible]

for the [illegible] all as to among the nursing staff if the order is changed [illegible] the anæsthetic room will inevitably ensue.

[illegible] in the operating room is necessary. Each surgeon has his own [illegible] technique but the fundamental principles governing the operative treatment of all wounds are now more or less standardized and acknowledged by all surgeons. When considered necessary anti gas serum is usually given here while the patient is under the anæsthetic. Gas and oxygen with ether is the anæsthetic of choice but in many cases of simple fracture have been dealt with by the use of evipan sodium, combined with gas and oxygen. Local anæsthetic has also been employed on many occasions in the treatment of fracture casualties.

It may be of interest to give a list of the injuries sustained in a bombing attack and treated in hospital some hours later.—Forty nine cases in all were admitted in the space of about one hour—four of these were in a moribund condition and died soon afterwards. Their wounds were extensive and included internal injuries of the chest and abdomen. In one case the abdomen was opened and though the external evidence of violence was slight the transverse colon was found to be perforated and the liver torn into several fragments. There was a wound leading into the chest from the abdomen and the whole peritoneal cavity was full of blood. How this man [illegible] so long and gallantly remaining at his place of duty in the end is a complete mystery. He survived the operation by about two [illegible]. One case of severe multiple injuries with an open pneumothorax and extensive lung damage died shortly after an attempt was made to close [illegible] and of the chest. Two others suffering from multiple fractures and [illegible] injuries died shortly after admittance and no treatment was possible in either case. The remaining forty five cases all recovered and were later [illegible] or returned to duty.

The casualties were made up as follows:—

[illegible] injuries			4
[illegible] fractures	Maxilla	1	
	Scapula	2	
	Tibia and Fibula	3	
	Humerus (necessitating amputation)	1	
	Fibula	1	
[illegible]	Penetrating	2	1
[illegible]	Penetrating		1
[illegible]	Fracture of vault	3	
	Scalp wound	3	1
[illegible]	[illegible] lower third of tibia (necessitating amputation at high thigh level)		1
[illegible]			27

Many of these latter wounds involved the deep structures and caused much [illegible] of muscle with retention of missile in the majority of cases. In [illegible] foreign body or bodies were found in the time of the

original operation in others after subsequent X-ray [illegible] fractures of the skull were compound and in one [illegible] was firmly wedged in the fracture.

The one case of abdominal injury mentioned above [illegible] in that the steel fragment crossing the wound entered the [illegible] the umbilicus and passed straight back to lodge near the [illegible] body was not recovered and subsequent X-ray examination [illegible] a ragged outline and to be roughly the size of a shilling. [illegible] condition resembling a Richter's hernia was found [illegible] lerance of a loop of ileum being tightly wedged in an [illegible] of the parietal peritoneum. The whole gut was systematically [illegible] stomach to pelvic colon and no lesion of any description [illegible] No free blood was obvious in the peritoneal cavity. [illegible] operation much distension took place and he had consulted [illegible] pain with a rise in temperature. Anxiety nose [illegible] to opening the abdomen but fortunately this was not done [illegible] and enema followed by one of soap and water produced [illegible] bowels and a disappearance of his alarming symptoms.

One of the penetrating chest wounds produced [illegible] suggestive of splenic injury that a small exploratory [illegible] upper left abdomen. As no free blood was present the [illegible] and the chest condition dealt with. This patient had [illegible] eventually pulled through.

In addition to this list numbers of walking cases [illegible] discharged after treatment. Their wounds were [illegible] and abrasions of various parts of the body. The [illegible] ever took up a lot of time and was carried out [illegible]

In contrast to this rather sanguinary list [illegible] patients received in hospital after their ship had been [illegible] under explosion. Twenty-five casualties were admitted [illegible] up as follows:—

Contusions (simple)	[illegible]
Gas	[illegible]
Sepsis	[illegible]
Hemorrhoids	[illegible]
Herpes [illegible]	[illegible]
Injury	[illegible]
Wounds	[illegible]
Other medical cases	[illegible]
Total [illegible] patients)	[illegible]
Fractures (simple)	[illegible]
[illegible]	[illegible]
Mandible	[illegible]
Nasal [illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

[illegible] in the hospital first and the [illegible] the old like. He was arrived [illegible] from an eye with socket. He [illegible] there he had stopped his [illegible]

On [illegible] and bones of the face and cranial abdomen to a [illegible] recovery from his injuries [illegible] traction and later by means [illegible]

[illegible] the radius and ulna was complicated [illegible] Reduction was easily obtained by [illegible]

[illegible] ample hernias occurred as a result of [illegible] and [illegible] were almost entirely absent [illegible] is a long and laborious task [illegible] but has an invaluable asset

[illegible] the courage and cheerful outlook of [illegible] who had the privilege of [illegible] to the high opinion which all [illegible]

THE OPERATIVE TREATMENT OF INGUINAL HERNIA WITH AN ACCOUNT OF A NEW USE OF FASCIAL STRIPS

By [illegible] E. PEARCE GOULD M.Ch. F.R.C.S.

Consulting Surgeon to the Royal Navy

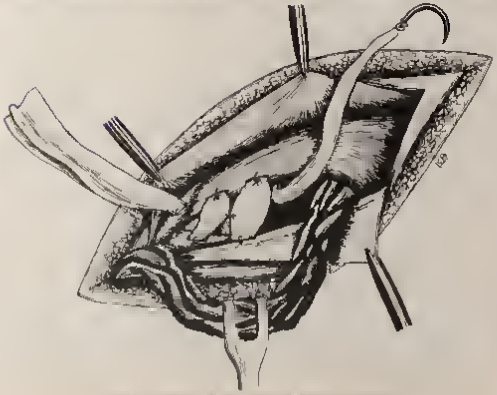
It is generally agreed [illegible] recent inguinal hernias in boys and [illegible] if nothing more is done than [illegible] There is equal agreement [illegible] large complete hernia of some [illegible] permanent some form of deep [illegible] between these two classes of [illegible] most surgeons feel happier if [illegible] the method associated [illegible] delicate concern which [illegible] of this well tried operation [illegible] appears to call for something more [illegible] fascial strips of one kind [illegible]

[illegible]

[illegible]

[illegible]

[illegible]



[illegible]

[illegible] drop back [illegible]

The first [illegible] [illegible] It is important [illegible] be inserted [illegible] be divided across its length. Bleeding [illegible] two pairs of Spence's Wells forceps [illegible] of the muscle [illegible] fig. 1.

The graft which [illegible] by a free exposure [illegible] in 9 in. long and 1 in. in width. After separation [illegible] strip is then cut obliquely so that its width [illegible] towards the other, where the full width [illegible] illustration the narrow end is seen [illegible] devised by Moseley and illustrated [illegible]

Fig. [illegible] Moseley's Forceps.
(By kind courtesy of Messrs. Allen & Hanbury.)

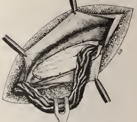
when opened enough to grasp the strip [illegible] the eye and [illegible] the needle and make therefore smaller holes [illegible] fragment [illegible] inconvenient but necessary to have to open it at the [illegible] pointing in opposite directions.

Insertion of the strip is begun by drawing the [illegible] and the [illegible] edge of the sigmoid the rectus muscle and the peritoneum [illegible] spine and then through [illegible] is seen in the picture. The even inches are marked [illegible] in the average case [illegible] and for [illegible] the [illegible] with no pulling, more than the slightest [illegible] the [illegible] the [illegible] tendon. The end is [illegible] just internal to the internal ring.

The next step [illegible] [illegible] [illegible] in [illegible] [illegible] sheet [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] is [illegible] [illegible] [illegible] a [illegible] [illegible]. [illegible] purpose [illegible] [illegible] [illegible] to be the most [illegible] [illegible].

[illegible] illustrates [illegible] [illegible] [illegible] operation completed.

Before [illegible] [illegible] [illegible] patch provided by the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] split in the middle [illegible] [illegible]



[illegible] [illegible] [illegible] [illegible] [illegible]

[illegible] [illegible] [illegible] [illegible]

[illegible] The

[illegible]

[illegible]

[illegible]

[illegible] emphasize how important it is if this result is [illegible] in any fascial graft operation that successive [illegible] through different muscle fibres. In recurrent [illegible] much of the lower border of this muscle is replaced by [illegible] still possible to employ the same principle [illegible] bands that are penetrated and not muscle fibres.

[illegible] There were 111 cases of which two were [illegible]. The [illegible] this death was bronchopneumonia after the operation [illegible] bilateral case. At the post-mortem examination the [illegible] on the first side was removed entire with a view to its [illegible] interval—a matter of a few weeks after the operation [illegible] in which the fascia was imbedded was [illegible]. Experience gained from operating upon recurrent [illegible] proves that this initial excessive reaction undergoes [illegible] the individual strands of fascia, although welded [illegible] the less be clearly defined.

Of [illegible] 11 were direct herniæ, 1 recurrent, and the [illegible]. The [illegible] the patients were as follows:—

[illegible]	1
[illegible]	12
[illegible]	[illegible]
Total	[illegible]

[illegible] in four cases became infected. In one the infection was [illegible]. [illegible] three, all operated upon the same day, [illegible] to an assistant's throat. All [illegible] recurred.

The [illegible] cases in this series have [illegible]:—

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	1 [illegible]
Total	[illegible]

[illegible]

[illegible] the different [illegible]

[illegible]

[illegible] W[illegible] [illegible]

[illegible]

Conclusion

[illegible]

[illegible]

Summary

[illegible]

[illegible]

THE CURE OF TREATMENT OF VARICOSE VEINS

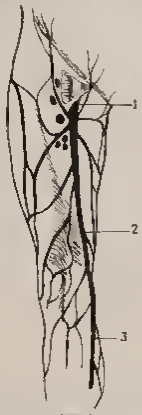
BY [illegible] HURT, M.B., [illegible] ENG.
[illegible] Surgeon [illegible]

[illegible] saphenous [illegible] It is the treat[illegible] I wish to [illegible] ing agents [illegible] neglected. This [illegible] are not [illegible] two years [illegible]

[illegible] briefly [illegible] deep veins [illegible] thigh and [illegible] vein at the [illegible] other spine [illegible] inner side [illegible] pumping [illegible] pressure in [illegible] the [illegible] disease [illegible] children.

[illegible] with [illegible] per cent [illegible] does not [illegible] bitter [illegible]

[illegible]


1
2
3

[illegible]

[illegible] prepared [illegible] has pointed [illegible] and [illegible] only [illegible] pointed

[illegible] copy [illegible] and [illegible] As [illegible] as [illegible] weakly [illegible]

[illegible]

[illegible] —If the valves [illegible] plasmas vein is liquid [illegible] generally combined with [illegible] [illegible] the vein. The [illegible] [illegible] for if it is perfectly [illegible] and the [illegible] [illegible] the valves [illegible] [illegible] 1-4 mm under [illegible] microtiles [illegible]

[illegible] the valves (fig. 2). The [illegible] [illegible] the vein [illegible] the [illegible] [illegible] The [illegible] is expected [illegible] [illegible] 0.00 [illegible] [illegible] experiment [illegible]

[illegible] times will generally lead one to the main trunk. [illegible] finding the [illegible] vein punctured the glisson[illegible] [illegible] vein exposed. The vein [illegible] then clamped both proximally and distally, and the tributaries divided between ligatures. Most [illegible] the excised and the proximal end doubly ligated. A [illegible] catheter is then introduced into the [illegible] of the vein and silver ring, about special ring [illegible] withdrawn during the operation and when the [illegible] ligated (fig 4). The [illegible] and skin closed and [illegible] by [illegible]

Note In those cases where the main communication [illegible] their valves incompetent, hernias must be treated by [illegible]

Fig 3

Fig 4

After Treatment The patient remains [illegible] for six hours after [illegible] operation and is then allowed to return to light duty. This is most important. Directly unfavorable treatment quickly results in the danger of [illegible] hernia.

It is probable that the gut incompetent at one or more points in the [illegible] proximal ligature. The mesenteric sphincters may be the [illegible] pinched by the injection of [illegible] fluid. In this way an extension of the hernia is started. Should any of these knots remain these may be [illegible] injection.

BIBLIOGRAPHY

[illegible] Dec [illegible] 165, [illegible]

DENTAL ANÆSTHETICS: THE VARIATION BETWEEN SERVICE AND CIVILIAN ANÆSTHETICS

By [illegible] Commander H. BARRY PRICE, R.N.V.R.

[illegible] *Hospital* [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Further, [illegible]

[illegible]

[illegible]

[illegible] lancet. This is then compared [illegible] fine [illegible] la about [illegible] long. When this has been inserted [illegible] an exceedingly fine needle can be passed through [illegible] with a minute hole. The solution percaine [illegible] injected slowly and at the same time an assistant [illegible] The patient is now turned over on [illegible] with head of table slightly lowered. This point [illegible] If omitted an anterior block only may take [illegible] develop motor paralysis without analgesia. The [illegible] is usually made between L. 2 and 3. The amount of [illegible] the type of operation. 15 c.c. are needed for [illegible] For prostates, hernias, &c. 12 c.c. will [illegible] are definitely dangerous. Sometimes we [illegible] for such small things as hæmorrhoids [illegible] the patient is propped up and there [illegible] for seven minutes. The Howard Jones [illegible] in the fact that the operation can last [illegible] patient is saved a good deal of after pain. M[illegible] sleep for an hour or more after the [illegible] enough to administer a little [illegible] pain stimuli enables the intravenous [illegible] falls of blood pressure have never been [illegible] fall in pressure when spinals are given to [illegible] operation in our series of cases has [illegible] One man whose pulse and colour [illegible] oxygen with CO_2 absorp-[illegible] the rate of the respiration per [illegible] of coramine were given [illegible] and the man made an uneventful [illegible] moments real anxiety. [illegible] in all cases. The only thing I [illegible] the respirations. Recoveries have [illegible] no vomiting—no

[illegible]

patient.

People [illegible] round smiling [illegible] people off more than [illegible] proceeding from [illegible] After [illegible] should be blocked [illegible] for twenty [illegible] prevention of head [illegible] severe headache. [illegible] hours after operation [illegible] persisted for some [illegible] very important. The [illegible] operation [illegible] to have falls in blood pressure [illegible] before. I do not consider the [illegible] abdominal operations entirely [illegible] of pentothal followed by [illegible] been used for all gall bladders and [illegible] Before [illegible] that the patient has his throat and nose well sprayed with [illegible] as well as the usual premedication. With the help of a [illegible] the upper incisor teeth protected by a rubber pad. I prefer [illegible] (size about 8) and then carry on the abdominal [illegible] with N.O. [illegible] closed circuit. [illegible] very easy in strait bleeding in the nose. [illegible] since slight nausea arises causing some [illegible] for tissue cutting [illegible] and dental work. [illegible] even than [illegible] during. The catheter is straight in the pharynx [illegible] guided from between the vocal cords [illegible] finally be picked up and the patient. The [illegible] temple [illegible] the upper [illegible] One point which I feel [illegible] have experienced [illegible] preferable to other [illegible] vinegar than after [illegible] I use the catheter. [illegible] CO [illegible] health [illegible] relaxation [illegible] breathing. [illegible] CO [illegible] very dangerous [illegible] breathing. [illegible] the catheter [illegible]

[illegible] anæsthesia [illegible] [illegible] a simple CO [illegible]

[illegible] near the [illegible] CO and oxygen. CO [illegible] and certainly should [illegible] It is often the last [illegible] consider [illegible] dangerously shallow from [illegible] &c. provided the heart [illegible] as aided by CO. [illegible] than one occasion. A [illegible] average anæsthetic table [illegible] thing of the past. When [illegible] gags between clenched [illegible] Such a state of affairs can never [illegible]

[illegible] only one need be [illegible] When [illegible] anything else [illegible] remember [illegible]

[illegible] should be [illegible]

SOME MINOR NASAL [illegible]

By Sum[illegible]

[illegible]

Are my meth[illegible] spun in a large [illegible]

This is a [illegible] and [illegible] by a large [illegible] ring his bill [illegible] still a nodul[illegible] knuckle dusters [illegible] rather [illegible] far as it seemed [illegible] chance to write [illegible] they may be [illegible] stone fringe [illegible] organized [illegible] which the healthy [illegible]

Broken nose [illegible] may come from all [illegible] e.g. in changing [illegible]

On relieving [illegible] of three points [illegible] rubber plate of the [illegible] violence applied [illegible] all of them. The [illegible] be shelved over the [illegible] Almost any shaped [illegible] cartilage bridge [illegible] a large bony spur [illegible] the other nostril.

From the [illegible] of the nasal cartilage [illegible] in mornings [illegible] have been brought [illegible]

There may be a [illegible] of the bony and [illegible] nasal passage with [illegible] some swelling or [illegible] good plan to place [illegible] in cartilage [illegible]

[illegible]

[illegible]

[illegible] entry is [illegible]

[illegible]

desire

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] Rugby [illegible] bleeding [illegible] was [illegible] not [illegible] be [illegible] different.

[illegible] of the [illegible] times with [illegible] certainly. A [illegible] be kept well [illegible]

Swimming, [illegible] number of [illegible] after [illegible] a pole [illegible] crop of [illegible] dated [illegible] larger [illegible] Clyde [illegible]

I do think [illegible] from swimming. [illegible] ming baths [illegible] amongst the [illegible] efficient as [illegible] takes place [illegible] when the [illegible] method [illegible] used [illegible] both the [illegible] or thirty [illegible] without [illegible]

I think [illegible] of [illegible]

[illegible]

[illegible] the [illegible]

Nine [illegible]

[illegible] of the [illegible] baths, [illegible]

In [illegible] spread [illegible] [illegible] afterward.

CONVALESCENT HOSPITALS AND OTHER ESTABLISHMENTS

COMMISSIONER J. H. HEBB, C.B., C.B.E.
Ministry of Health

[illegible]

ADMISSIONS SITES

Colonel [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

BLOOD CLOTTING AND BLOOD [illegible]

By S. [illegible] W. M. [illegible]

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	O	AB	[illegible]
[illegible]	B	A	[illegible]
[illegible]	A	B	[illegible]
[illegible]	AB	O	[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible] Group AB (I) and B (III) [illegible] AB

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] *de infra*

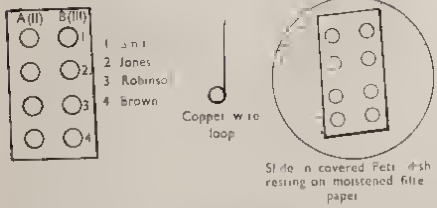
[illegible]

[illegible] The [illegible] a Petri dish the [illegible] paper [illegible] with [illegible] the closed [illegible]

Agg[illegible] cavum [illegible] in app[illegible] centre [illegible] Results [illegible] mistake [illegible]

The [illegible]

Test [illegible]	[illegible]	[illegible]	[illegible]
N [illegible]	[illegible]	[illegible]	[illegible]
Test [illegible]	[illegible]	[illegible]	[illegible]
Test [illegible]	[illegible]	[illegible]	[illegible]



7. *Special Hints.*—It is important that glass slides must be clean and free from alkali (see p. 8). Paper should be of such a calibre that a drop of serum and a drop of cell suspension will not flow over the paraffin in pencil rings. It is important that all apparatus be supplied with labelled. Therefore a grease pencil that writes clearly is essential.

A slide 3 by 2 in. can be divided into suitable compartments by pencilling rings made by dipping a copper wire loop in melted paraffin and applying loop to slide. Grease pencil distinctions are not satisfactory.

The Communicable Serum Diseases have made it difficult, but [illegible] serum types A (II), B (III) and O (IV). It is however a simple [illegible] to make [illegible] test serum (see Appendix).

Sterile [illegible] stored under optimal conditions in a refrigerator [illegible] unimpaired for six months.

Certain precautions should be taken —

[illegible] Group O (IV) serum containing both agglutinins must not be used in the determination of A (II) or B (III) sera. If agglutination results in blood cells in O (IV) serum and in cells with the A (II) or B (III) sera [illegible] that the agglutination [illegible] A (II) or B (III) sera is such that they cannot be used (for [illegible] make this clear).

Test for agglutinins against [illegible] cells in test the sera against known A (II) and B (III) cells as a check.

Method 7. — Dilute serum 1/10 and [illegible] agglutination occurs in [illegible] against agglutinable cells reported [illegible]

Occasionally one may find agglutination [illegible] when matching cells [illegible] group against serum of a different group. This may be [illegible] agglutination [illegible] not necessarily incorrect grouping. Repeat the test [illegible] 7 & 8. Certain non-agglutinins will indicate non-agglutination in the previous test. (In such [illegible] under these circumstances.

[illegible] happen [illegible] de-critical [illegible]

Methods of Collection and Measuring Blood Transfusion

Make a preliminary [illegible] is essential previously.

At the time [illegible] is collected in a Wright's [illegible] allowed to clot and then centrifuged. [illegible] clot [illegible] and [illegible] + and convenient [illegible] apparatus [illegible]

The same principle [illegible] the clot.

On a microscope slide (using [illegible] plate) place a drop of serum and add a drop of [illegible] cells. On [illegible] a drop of serum and a drop of [illegible] serum. [illegible] and observe results.

Blood Transfusion. — Some [illegible] and the [illegible] apparatus.

There are [illegible] Wright's [illegible] Wright's [illegible]

Wright's [illegible] A Wright's [illegible] be substituted [illegible] and [illegible] centrifuging.

If a Wright's [illegible] 78 [illegible] [illegible] the [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

[illegible]

[illegible]

Syphilis.—Since 1918 [illegible] have been reported (*Brit. Med. J.*, [illegible]).

The only safeguard [illegible] transfusion testing of the [illegible] and trouble. But the [illegible] such safeguard [illegible] for details of preparation [illegible] for syphilis (*ibid.*, Appendix).

Malaria and Filaria.—[illegible] for donors with these [illegible]

Appendix 1

[illegible]

[illegible]

[illegible]

General Remarks

[illegible]

[illegible]

[illegible]

Antigen for the Kline [illegible] supplied for blood groups [illegible] Kline [illegible] intervals of three [illegible]

Finally, as a National [illegible] population is by [illegible] needs of the Army and Navy [illegible] of voluntary donors is already on [illegible]

Summary

Blood Grouping

Add a 1 per cent suspension [illegible] to 1 drop of serum [illegible] results.

Do a Kline and if possible a Wassermann.

Blood Matching Before Transfusion

Test the serum of the recipient against the [illegible] the serum of the donor [illegible]

Scope of the method

(1) Why the above methods [illegible]

(2) Technical hints on [illegible]

(3) Safeguards to check [illegible]

Acknowledgments

I wish to thank Dr. Jones and Mr. [illegible] Pathological Department for [illegible] paper.

References

[illegible]

Ottenberg, R. (1915) [illegible]

Shaw, [illegible]

Williams, R. A. M. [illegible]

THE ADOLESCENT DELINQUENT

[illegible] B. CROWHURST ARCHER [illegible]
R.N. Hospital Haslar

[illegible] that occur during adolescence [illegible] that even the most normal [illegible] mental instability. It is as if [illegible] confronted with the parting of the ways. In one [illegible] efficiency and happiness, and in the other [illegible] its attendant misery and social distress. Upon [illegible] lives at this time will depend which direction is [illegible] the consequences of mismanagement [illegible] place [illegible] mental handicaps.

[illegible] is the second period of [illegible] the most important [illegible] of really helping the patient [illegible]. The [illegible] period [illegible] was during the first [illegible] The relationship of these two [illegible] depends [illegible] made.

Not [illegible] introspection and [illegible] During this [illegible] development is delayed [illegible] Finally [illegible] his childhood [illegible] his place in the world.

[illegible] the physical health [illegible] Then again [illegible]

[illegible]

[illegible] and unsi[illegible]

[illegible]

[illegible]

cases [illegible] pursue [illegible] and often end by [illegible] the latter [illegible] other hand [illegible] to make themselves felt somehow and thus force [illegible] themselves to a group or gang and take on the dangerous [illegible] in order to get recognition

One of the common difficulties in dealing with juveniles is that they are regarded as adults in maintenance whereas their outlook is not only entirely fallacious but is constantly changing Further the adult can change his [illegible] or if not comfort himself with the thought that he could if he wanted to the child on the other hand, knows that he cannot and [illegible] disorders are not infrequently abortive attempts on his part to [illegible] change in a situation which he feels to be pressing too heavily [illegible]

It becomes increasingly clear that a classification in terms of the offence is [illegible] in the management of a case For example violence may be due to incipient insanity epilepsy the recondite type of high grade mental deficiency emotional instability and in certain cases neurotic conditions Sexual offences frequently occur during adolescence and may be due to a disorder of desire or to an attention to themselves Sleepy sickness must not be forgotten nor the effects of temperament and the individual variation of the sex instinct In many cases the legitimate and normal interest in sex has been repressed The parental attitude in early childhood towards this question the absence of adequate preparation for nocturnal emissions and the onset of the menses together with unsatisfactory parent-child relationships forces the emotionally starved boy and girl to plunge into adolescent experimentation with sex outside the home

Stealing too may be due to a variety of causes including the epilepsies sleepy sickness and disorders of fat and sugar metabolism In neurotic cases it may be to pay off old scores to attract attention and in the case of the spoilt child due to a desire for power Deprivation of affection and as a compensation for feelings of inferiority are other causes frequently found

From the foregoing considerations it will be seen that the cause of delinquency may be considered under the following headings —

(1) Those cases which are due to neurotic conditions and are definitely curable by modern methods of mental treatment

(2) A larger number caused by defective discipline and unsatisfactory social conditions which can best be helped by combined sociological and psychological methods rather along Child Guidance lines

(3) Those due to physical disease mental deficiency and incipient insanity

(4) The remainder appear to be in the nature of constitutional defects [illegible] are purely social and educational problems and require varying degrees of training care supervision and control

From the standpoint of treatment the groups might be rearranged [illegible]

(A) [illegible] Dangerous [illegible] Mental [illegible] aggressive [illegible]

(B) Permanent [illegible] to physical [illegible]

(C) Education [illegible]

(D) Three [illegible]

So far as juvenile [illegible] punishment will [illegible] friendship [illegible] to say the least of it the first result [illegible] opinion of a specialist in mental [illegible] rises so that the Bench may have an opportunity [illegible] facts. Unless this [illegible] impossible for them [illegible] prisoner's norm is and how far responsible for home [illegible] standard and the environment [illegible] if all concerned.

This does not mean that punishment on the [illegible] is unnecessary —

A young man who through childish [illegible] nurtsely helped out of every difficulty [illegible] some articles and offered to pay by cheque. [illegible] cheque but asked permission to telephone the bank. [illegible] and the shop was informed that [illegible] in the young man's name. The [illegible] it was held that the young man [illegible] shop to telephone the bank [illegible] was dismissed. The real explanation was that [illegible] been helped out of all his previous difficulties by [illegible] relatives and nothing would have been better [illegible] sharply dealt with by the Court and for an [illegible] been asked to help him understand the situation [illegible]

From the foregoing considerations it seems [illegible] persons convicted of offences during adolescence [illegible] in any case going through both physical and mental [illegible] dealt with by the routine method of punishment. [illegible] of society a period of segregation is called for they [illegible] the necessary skilled help in readjustment.

There is still a lot of loose thinking about the subject [illegible] delinquent but fortunately one sees definite signs [illegible] and sentimental attitudes are giving way to a more [illegible] be hoped that with greater understanding of the [illegible] ordered conduct the time is not far distant when all [illegible] the stormy period of adolescence will receive the [illegible] that they so urgently require.

Clinical Notes

[illegible] INGLIS AND [illegible] SURGERY

[illegible] COLVIN M[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

At 09 [illegible] normal [illegible] find [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] deltoid muscle [illegible] Move[illegible] [illegible] 80 [illegible]

[illegible] 100 [illegible]

[illegible]

[illegible]

A CASE OF [illegible] (CHRONIC [illegible])

By [illegible]

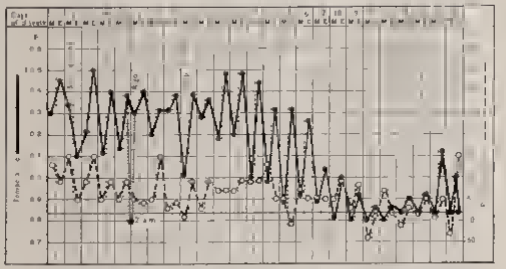
[illegible]

[illegible]

[illegible]

A [illegible] OF [illegible] [illegible]

[illegible]



[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

A SHORT CLINICAL [illegible]

By [illegible]

One of the most [illegible] and subtropical climate [illegible] is not [illegible] having numerous methods [illegible] satisfactory results is now [illegible]

It was found from [illegible] would do [illegible] is important [illegible] be pursued in after the [illegible] all be [illegible]

All the [illegible] that the dye from which [illegible] [illegible] sodium [illegible] perhaps [illegible] sandals [illegible]

With regard to the [illegible] continuants [illegible] relief but [illegible]

[illegible]

[illegible] TECHNIQUE

[illegible] J. G. HOLMES, M.D., [illegible]

[illegible]

[illegible] is going [illegible] I so [illegible] they are [illegible]

(5) Bo[illegible] [illegible] yourself [illegible] that the [illegible] warm [illegible] the [illegible] tanks and [illegible] then [illegible] [illegible] fresh [illegible] [illegible]

(6) In [illegible] [illegible] through which [illegible]

(7) After [illegible] tartar emetic [illegible] If this [illegible] avoided [illegible] is still in the [illegible]

Correspondence.

CHARTERHOUSE RHEUMATISM CLINIC

TO THE EDITOR OF THE JOURNAL OF THE ROYAL NAVAL MEDICAL SERVICE

SIR,—I would be glad of the hospitality of your [illegible] that all Medical Officers of the three Services who [illegible] personnel by the standard [illegible] of the Charterhouse [illegible] can obtain supplies of the [illegible] use of that [illegible] application by letter to the Secretary, The Charterhouse [illegible] 60 Weymouth Street, London, W.1. [illegible] assistance if Medical Officers were [illegible] in the use of [illegible] methods.

I am, etc.,

Charterhouse Rheumatism Clinic [illegible]
56/60 *Weymouth Street*, W.1.
February 15, 1940.

ANTIMONY TARTRATE IN LYMPHOGRANULOMA INGUINALE

TO THE EDITOR OF THE JOURNAL OF THE ROYAL NAVAL MEDICAL SERVICE

SIR,—I would crave the indulgence of your [illegible] comment on Surgeon Lieutenant Commander [illegible] article in the October number—or rather that part [illegible] management of lymphogranuloma inguinale.

He reports disappointing results in the [illegible] ment had been instituted by the intravenous [illegible] Without wishing to attempt a further assessment [illegible] ficial attributes of tartar emetic admittedly [illegible] with him on the question of the local treatment [illegible]

the mon[illegible] [illegible] lp feeling that the [illegible] effect [illegible] [illegible] dition is [illegible] [illegible] (i.e. if it [illegible] [illegible] a *cold* abscess or something [illegible] [illegible] is to my [illegible] further [illegible] [illegible] of a drug administered [illegible] naturally. I am firmly convinced that the [illegible] minimum of local [illegible] or stimulation is essential.

In 1934 when I [illegible] [illegible] little known—certainly [illegible] not got [illegible] [illegible] tion to the affected [illegible] region would be the ideal local treatment [illegible] its parous constituent [illegible] [illegible] and the gentle elastic pressure exerted promote resolution. No doubt [illegible] points may have chiefly prompted its adoption by some Medical [illegible] stationed where cases are [illegible] found. If so it would be interesting to hear of their conclusions.

I am, Sir,
Your obedient servant,
S. [illegible] GEDEN,
Surg. Lieutenant Commander.

H.M.S. Shorehem
c/o G.P.O. London
December 8, 1939.

Reviews.

THE EARLY DIAGNOSIS OF THE ACUTE ABDOMEN. By Zachary Cope, B.A., M.D., M.S. Lond., F.R.C.S. Eng., Surgeon to St. Mary's Hospital, Paddington, Senior Surgeon to the Bolingbroke Hospital, Wandsworth Common, Late Hunterian Professor and Arris and Gale Lecturer, Royal College of Surgeons. Eighth Edition. Pp. 247, 36 illustrations. London: Humphrey Milford, Oxford University Press. Price 10s. 6d. net.

The fact that this [illegible] well known [illegible] medical practitioners has run into eight editions since 1921 is sufficient evidence to establish its excellence.

As the author states in his preface: "The alterations in the eighth edition consist of many small verbal changes and additions and the inclusion of [illegible] X-ray photographs. No serious changes have therefore been made."

The acute abdominal emergency [illegible] [illegible] of the forces of disease with which [illegible] [illegible] to recognize at once the signs which will indicate on what front the enemy is going to strike. It is running disaster to play the waiting game [illegible] [illegible] the [illegible] is invaded by a pandemic process if the attack starts by blocking the narrow channel of the appendix.

In 1937 as the author reminds us, 2,821 patients [illegible] died of acute appendicitis. This shows us how often the seriousness of the symptoms goes unrecognized by patient or doctor until too late. It is [illegible] therefore not be too much to say that this is the [illegible] of such [illegible] and Mr. Cope's excellent book.

Two chapters are devoted to the [illegible] history and examination of the patient, and an example of [illegible] used for [illegible] at St. Mary's Hospital is included. Another deals with the causes of [illegible] pain in the right hypochondrium—the area of high stress. Running [illegible] through the discussion

[illegible]

H. L. H.

[illegible]

H. L. H.

[illegible]

The first half [illegible] of injuries [illegible] hand. Dr Cunningham [illegible] the general principle

which should [illegible] with wounds [illegible] The methods of [illegible] are then detailed and the need for covering [illegible] is emphasized. The last two chapters of this section of the book [illegible] with the principles of surgical and the Levels of Amputation. The little [illegible] variety of these [illegible] could not be improved upon.

The second part of the [illegible] is devoted to the [illegible] and is excellent as a little disquisition. The reader will find [illegible] of the bones, muscles, contusions and the colour of the part, infections of the thumb [illegible] joints, crush injuries and [illegible] Nine pages are given to show the other [illegible] pictured in [illegible] and the amount [illegible] would very probably [illegible] the [illegible] to the theatre [illegible]

Though the crossed [illegible] is [illegible] of excellence of the book [illegible] Notes [illegible] reproducible [illegible] unhurried [illegible]

J. B. D.

Diseases of the Upper Respiratory Tract. By L. F. Ormerod, M.D., M.Ch., F.R.C.S., Eng., Surgeon to the Throat and Ear Department, Brompton Chest Hospital, Surgeon, Golden Square Throat, Nose and Ear Hospital. &c. 1959. Pp. 217. 65 illustrations, 28 in colour. London: John Bale Medical Publications Ltd. Price 21s.

When the examiner saw in Dr. Ormerod's preface, on a [illegible] judgment of [illegible] from old chief that grand old man of laryngology, Sir Felix Semon, he felt warmed towards the author and this excellent book.

With designed primarily for physicians who are [illegible] tuberculosis [illegible] it is of great value to those laryngologists in hospitals and [illegible] specially devoted to diseases of the chest and who do not see the [illegible] manifestations of tuberculosis in the throat, nose and ear [illegible] of these special hospitals.

The author has gathered from the huge fields of his [illegible] experience and [illegible] of knowledge which he has given to us in a very readable [illegible] book with a very full list of references to the literature [illegible]

He deals with all the tuberculous and tumours affecting the nose and [illegible] Helpful hints on the examination of the oesophagus and [illegible] N.P. specialist this book should be indispensable while [illegible] Medical [illegible] and the ordinary [illegible] practitioner [illegible] the Sinus, Pneumonia and Alveolitis Chronic [illegible] Nasal Bronchial [illegible]

I. M.

[illegible] the Time. Health Commissioner with the Government [illegible] 1937. Published. Vol. I. with appendices. Ist the Manager [illegible] of India Press, New Delhi. 1940. Pp. [illegible] Rs. 3 or 5s.

With the passing of [illegible] is obtainable [illegible] the [illegible] of the mass of information furnished

[illegible] absent [illegible] occasion [illegible] 1096 d[illegible] plague [illegible] place in the pap[illegible] [illegible] very high [illegible] for [illegible] institution have the [illegible] of the rit popu[illegible] have devel[illegible] extremely [illegible] popular.

[illegible] stated [illegible] point of [illegible] thousands of [illegible] suffer [illegible] 1896 [illegible] but the [illegible] fever [illegible] The Direct[illegible] caused from [illegible] has practically the [illegible]

Typhoid.—[illegible] reference is made to [illegible] epidemics of typhoid [illegible] typhoid in the [illegible] 2,501 [illegible]

Hydrophobia.—[illegible]

[illegible] the Report [illegible] Institution [illegible]

Captain [illegible] summarized [illegible] publications in the [illegible] of [illegible] 80 [illegible] languages [illegible] English [illegible] School of Aviation Medicine [illegible] States [illegible] been published [illegible] history [illegible] to the early work [illegible] in France [illegible] Berlin [illegible] been [illegible] by later [illegible]

The [illegible] The Flight Surgeon [illegible] will probably [illegible] be so far [illegible] American readers. It gives a most interesting account of [illegible] in the United States [illegible] Medical Office [illegible] qualified Flight Surgeon. This comprises a four month course [illegible] School of Aviation Medicine at Randolph Field, Texas. It is of [illegible] specialists in various aspects of medical practice are not considered [illegible] systems of the body [illegible] knowledge. A well [illegible] to be preferred [illegible] specialist in any [illegible] years attached to [illegible] necessary before [illegible] Flight Surgeon [illegible] those phases of aviation medicine [illegible] taught from books. [illegible] this country [illegible] Medical Officer attached to an Air Station [illegible] The course at the School of Aviation Medicine [illegible] Neuropsychiatry [illegible] Aviation Medicine. [illegible] the student to understand [illegible] the pilot [illegible] practical instruction at the school [illegible]

After [illegible] chapter [illegible] the United States Army [illegible] the British [illegible] Schneider Index [illegible] different positions.

The Neuropsychiatric [illegible] [illegible]

The rest of the book [illegible] comprehensive [illegible] modern [illegible] flight surgeon [illegible]

[illegible] differences [illegible] till [illegible] standpoint [illegible] Shave. The bibliography [illegible] might have been [illegible]

[illegible]

THE [illegible] By Frank A. Buxton, M.A. [illegible] Department [illegible] School [illegible] Pathology, University of London. [illegible] 28 [illegible] Edward Arnold & Co. [illegible]

Professor Buxton's [illegible] appearing moment [illegible] most children itself [illegible] brought [illegible] world.

One [illegible] instance that [illegible] the Tunnel Section [illegible] in two years [illegible] in the region about 10,000 deaths [illegible] country. In his preface [illegible] consists formulated in full [illegible] of Eugenics [illegible] [illegible] Section of the [illegible] Buxton [illegible]

It is disappointing [illegible] Immunity [illegible] many of them [illegible] various [illegible] work on the [illegible] in hot climates [illegible] soldier in the [illegible] Boer War [illegible] in the same and [illegible] chapter on the Cell [illegible] specific [illegible] the [illegible] in Weigl for [illegible] experimental [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

A large part of the book deals with housing and [illegible] mentioned in its proper place in the chapter on the [illegible] of the Food and Drugs Act 1938 which [illegible] 1939. The book contains [illegible]

[illegible]

[illegible]

A Little Memoir [illegible] 1940 [illegible]
Oakes S R N D N Lond and Leeds [illegible]
M D M R C P Pp 409 [illegible]
Price [illegible] 6d

This little book [illegible] makes no claim to be a complete [illegible] most of the usual items [illegible]

Further there is [illegible] of first aid methods [illegible] than antidotes and [illegible] use description of [illegible] with this form of [illegible]

In all this forms a very [illegible] [illegible] Service Medical Library

[illegible]

Fossa Ant By S E J [illegible] M S F R C S [illegible]
Pp 18 Oxford University Press [illegible]

Last month the second [illegible] Oxford University Press [illegible] Rixton M S F R C S [illegible] and consists of forty eight [illegible] tions of the diagrams [illegible] Cross Society

The labelling of diagrams [illegible] price for further annotation [illegible] 2s 6d

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News of the Service.

ADMIRALTY ORDERS

1913 Sick Berth Attendant Probationers—Period of Training

(N [illegible] 31 [illegible] 1939)

[illegible] Regd Attendant Probationers except R N A N B R ratings is to be [illegible] weeks [illegible] Course [illegible]

[illegible]

[illegible] Patients to Hospital—Attendance of Medical Officer

(N I [illegible] 3655/39—14 [illegible] 1939.)

In [illegible] the special arrangements [illegible] Medical Officer is to accompany the patient [illegible] practicable on [illegible] the exigencies of the Service [illegible] of Article 1340 Kings Regulations and Admiralty Instructions will [illegible] in the above sense.

3985.—Royal Naval Hospital Port Edgar—Address.

(M D G 16911/39—14 12 1939.)

[illegible] for information and guidance that Port Edgar is situated on the south [illegible] Firth near South Queensferry in West Lothian. The nearest station [illegible] is Dalmeny (L & N E Railway) and for goods South Queensferry. The address [illegible] indicative is

R N Hospital
Port Edgar
South Queensferry
West Lothian

4165.—Dental Records.

(M D G 16925/39—21 12 1939.)

[illegible] opportunities for dental treatment at the training centres the charting [illegible] of records on entry (Forms A S [M C] 14 and M-227) is to be [illegible] that complete record should be kept of personnel in need of treatment and to [illegible]

2 The record of dental treatment for all serving personnel is to be entered only on Form M 228 except in the cases of continuous service ratings when the Form M-227 is available. The use of Form A S (M C) 14 for recording dental treatment is cancelled. Each [illegible] indicate clearly the section of the naval forces in which the officer or man is serving i e R N R R N V R Hostilities Only &c.

DISPOSAL OF RECORDS

(Filing centres to which records are to be forwarded)

(a) *Officers*	To the Medical Dept Admiralty
(b) *Continuous Service R F R Personnel and Hostilities Only Ratings*	To the Port Dental Officer at the appropriate Port Division
(c) *Royal Marines Reservists Pensioners and Regular Marines for Hostilities Only*	To the appropriate filing centre for the respective Divisions—the Royal Marine Infirmaries at Portsmouth Chatham and Plymouth
(d) *Fleet Air Arm R Ratings*	
(i) *Flying Personnel*	To the Medical Dept Admiralty
(ii) *Air Artificers Air Mechanics Air Fitters and Riggers*	To the Dental Officer H N Air Station Lee-on-Solent
(e) *R N R and R N R (T) Ratings*	Surnames A to H (inclusive) to R N Barracks Chatham
	Surnames I to L (inclusive) to R N Barracks Portsmouth
	Surnames Q to Z (inclusive) to R N Barracks Devonport
(f) *R N V R Ratings*	London and East Sussex Divisions to H N Barracks Chatham
	Clyde East Scottish and Mersey Divisions to R N Barracks Portsmouth
	Severn Tyne and Ulster Divisions to R N Barracks Devonport
(g) *Miscellaneous Personnel*	To the Medical Dept Admiralty

4144.—Women's Royal Naval Service—Medical and Hospital Treatment.

(C E 29906/39—28 12 1939.)

[illegible] instructions which follow are to be brought to the notice of all concerned.—

Note. No liability will be accepted by the Admiralty for any expense incurred [illegible] number of the W R N S who declines to accept or fails to comply with the

[illegible]

Medical Treatment

[illegible]

Invaliding

[illegible]

Hospital Treatment

[illegible]

Invaliding

[illegible]

[illegible] All officers [illegible] Judge of the W R N S when [illegible] [illegible] expense of the Grant-in-Aid for the period of such training shall be [illegible] [illegible] bed-by-bed basis [illegible] [illegible] 27 a year [illegible] 208 a week [illegible]

(*A F O* 3 97 39)

4166 —Additional Syringes and Morphine—Issue to Destroyers

(M D G 14624 40 —28 12 1939)

[illegible] following additional medical stores should be drawn by destroyers

Those in which a Medical Officer is borne—Morph Sulph Hypodermic [illegible]
Hypodermic Syringes 20 mls 2 No Wilkes Syringes 1 No [illegible]
Those in which a Sick Berth rating is borne—Morph Sulph Hypodermic [illegible]
2 oz Syringes as above
Other destroyers not carrying a Medical Officer or Sick Berth rating Morph [illegible]
Lanolin 2 tins at 24 Lanolin

4169 —Electric Kettles—Allowance for Surgical Dressing Stations

Capital Ships Cruisers Aircraft Carriers and Repair and Depot Ships

(N S 14686 40 —28 12 1939)

An electric kettle should be provided for each distributing or dressing station the requirement being met by the use of the kettles at present allowed for the sick bay and dental surgery Ships not fitted with a dental surgery may demand an [illegible] 8 in electric kettle for use in the distributing or dressing station

2 D H [illegible] 320, Establishment of Naval Stores for Electrical and Torpedo Purposes will be amended

75 —Anti Cholera Vaccine—Supply

(M D G 8312 39 —4 1 1940)

Stocks of Anti Cholera Vaccine are also now available at the R N Medical Depot Trincomalee and the H N Sick Quarters Wei Hai-Wei and this material may be drawn by R M ships &c as requisite

(*A F O* 1677 39)

***165 —Sick Berth Ratings—Examination for Advancement**

(N 12034 39 —11 1 1940)

Their Lordships have decided that for the period of hostilities Sick Berth Ratings will be permitted to pass final examinations for advancement at any Naval Hospital or Naval Hospital Ship (notwithstanding that a pharmacist may not be borne) if there is readily access to one of the larger Naval Hospitals

2 This temporary modification in the Regulations may also be extended to cover any Naval Base where a Dental Medical Officer is can be formed

(*K R & A I Appendix XIII Part I Nos 107 110*)

107 —Divers—X ray Examination of Chest on Selection

(N 46 40 —11 1 1940)

In consequence of the recent death of a diver from asphyxia Their Lordships have decided that in future an X ray examination of the chest of all candidates for diver training married and prior to their being accepted for qualification

1 These X ray results are to be kept for future reference

2 The necessary amendment will be made to Article 581 (ii) of the Diving Manual

111 —Flying Personnel—Dental Records

(M D G 18655 39 —11 1 1940)

In amplification of A F O 4105 39 flying personnel are to be referred to a Naval Dental Officer on entry and their dental condition is to be recorded on Form M 24 (A F 48) Charts A and B

2 Details of subsequent treatment are to be recorded on Form M 248 only

189 —Medical Fitness of Hostilities Only Ratings

(N 14530 39 —18 1 1940)

Men placed in Grade I by the Medical Boards established under the National Service (Armed Forces) Act 1939 cannot be rejected for naval service unless gross defects which have been overlooked by the National Service Board come to light after entry These Boards have no facilities for testing colour vision and colour vision should then be disregarded in the case of men who are entered for the Seaman and Signal Branches

2 The National Service Medical Board place men in Grade I if —

(i) Their vision is 6 24 in both eyes and are without the aid of glasses

[illegible]

[illegible] Appointments [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] Bottles and Caps Return of Empties

[illegible]

[illegible]

[illegible] Claims &c.—Report

[illegible]

[illegible] Amendment [illegible]

[illegible]

[illegible] Ratings Engaged on T.124 Agreements—Medical Treatment [illegible] during Sickness and on Discharge Medically Unfit

(N. 1480 [illegible])

[illegible] Agreements [illegible] who are ensured [illegible] [illegible] that the [illegible] [illegible] Where [illegible] Naval Medical Officer [illegible] own [illegible] Sick Money Allowance [illegible] Allowance [illegible] entitled to free [illegible] Naval [illegible] that the Hospital [illegible] [illegible]

[illegible] Hospital [illegible] Naval [illegible]

[illegible] Hospital [illegible] prior to the [illegible] the term [illegible] extension of [illegible] days [illegible]

[illegible] W.R.N.S. Medical Examination on Entry

(M.D. [illegible] 1940.)

Officers [illegible] W.R.N.S. who have already provided themselves with certificates [illegible] fitness [illegible] practitioners at their own expense will not be required [illegible] Naval Medical Officers or Admiralty Surgeons and Agents [illegible] accepted as suffering [illegible]

[illegible] Ashore—Procedure

[illegible]

1 Admiral [illegible]

[illegible]

127.—Fumigating and Disinfecting Rooms and Compartments in Merchant Vessels

(M.D.G. 80/40—8.11.40.)

The attention of Medical Officers is called to the following as an alternative for fumigating and disinfecting rooms and compartments:

(1) The generation of chlorine [illegible] with water [illegible]

(2) The quantities required for [illegible] are as follows:

Potassium chlorate [illegible]

Chlorine [illegible]

(3) The compartment to be treated [illegible]

(4) Fumes of these chemicals [illegible] packets in [illegible]

(5) These packets are dropped [illegible]

(6) The compartment should [illegible] in the form of [illegible]

And the fumes should [illegible] time, except [illegible] well for [illegible]

The [illegible] should be [illegible]

[illegible]

128.—Issue of the R.N. Medical Service Articles in Publication

(M.D.G. 26/2.40—8.11.40.)

[illegible] Medical Journal should be addressed [illegible]

The Editor,

Journal of the R.N. Medical Service,

H.M. Admiralty Hospital,

Haslar, Gosport, Hants.

[illegible] R.N. and R.N.V.R. medical officers [illegible] they are sent [illegible] to the [illegible]

129.—Scale of Medical Stores in Service Afloat—Addition to

(M.D.G. 4/20.10—15.11.40.)

Medical officers serving in H.M. Ships may [illegible] supplies [illegible] cardiac and respiratory stimulants should be provided in the [illegible] by [illegible] of MCAMINE [illegible] British Pharmacopoeia [illegible] Cinnamon [illegible] Medical Stores Afloat.

2. Supply will [illegible] to H.M. Hospital Ship [illegible]

45.—Air Publication 130 (Medical Examination for Fitness for Flying)—Amendment List No. [illegible]

(M.D.G. 2866/40.—15.3.1940.)

Medical Officers in possession of copies of Air Publication 130 should [illegible] Amendment List No. [illegible] from the Naval Store Officer, Royal Victoria Yard, Deptford [illegible] has not already been received.

46.—Professional Examination for Warrant Wardmaster—January 1940—Result

(M.D.G. 112/40.—12.2.1940.)

[illegible] Royal Naval Hospital, Haslar, on January 18 [illegible]

			Marks								
			1st		1st		[illegible]		2nd [illegible]	Total	
[illegible]	[illegible]	No.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Oral	[illegible]	[illegible]	Result
[illegible]	[illegible] [illegible]	D/M.[illegible]	100	15	111	42	115	16	85	43	71	Passed
[illegible]	[illegible] [illegible]	D/M.4590	114	0	149	38	85	10	6	43	671	Passed

171.—Women's Royal Naval Service—Medical Returns

(M.D.G. [illegible] 1940.)

[illegible] W.R.N.S. [illegible] sickness occurring [illegible]

[illegible] including all those sent to [illegible]

[illegible]

676.—Women's Royal Naval Service—Dental Treatment, &c.

(M.D.G. [illegible])

[illegible] W.R.N.S. [illegible] dental treatment at the [illegible] Naval personnel [illegible] for the period of [illegible]

[illegible] the public expense under the [illegible]

[illegible]

655.—Women's Royal Naval Service—Surgical Appliances and Spectacles

(M.D.G. 5882/40.—20.3.1940.)

[illegible] Surgical Appliances will be supplied and maintained at the public expense [illegible] attributable to the Service. Spectacles [illegible] provided at the Admiralty expense [illegible] will be [illegible] will be provided.

[illegible]

[illegible] —Warrant Wardmaster—Professional Examination [illegible]

(C.W. [illegible])

[illegible] warrant officers [illegible] wardmaster [illegible] examination [illegible]

[illegible]

736—Sick Berth Rating, [illegible] Advancement

(N.I. [illegible])

[illegible]

784.—Construction and Repair &c. of Dentures at Service Dental Laboratories

(M.D.G. 6623/40.—3/1/1940.)

Staff of dental mechanics now employed at the following dental centres is:—

R.N. Barracks, Portsmouth.
R.N. Barracks, Chatham.
R.N. Barracks, Devonport.
H.M. Dockyard, Rosyth.
H.M.S. *Dundee*, Leith.

2. Dental Officers serving in shore establishments and in Naval Hospitals, H.M.S. *George Royal Arthur*, *Flamingo* and *Raleigh*. For which special arrangements are being made, and in H.M. ships serving in home waters, will in future forward medical forms for the construction of approved appliance work to which their laboratory is most conveniently situated. Special care is to be taken to ensure that the models are securely packed in a metal lunge in the medical form M.22, with full directions as to requirements, as these are invariably to be enclosed.

3. Normally cases will be dealt with at the laboratory in strict rotation, priority being given to urgent cases, but in cases of real urgency the facts should be reported to the Commanding Officer, the dental officer in charge of the laboratory will consult the Instructor in Dental Surgery, who will the work be proceeded with, unless the models are considered satisfactory and the dental dentures is opposed.

4. When cases are transferred from one laboratory to another during the course of construction, the dental direct [illegible] is to notify the Dental Officer [illegible] of the laboratory in which the earlier stage of construction was effected, in order that [illegible] information may be made in the laboratory records.

807.—Medical Stores Returned from H.M. Ships

(M.D.G. 6870/40.—7/11/1940.)

Attention is drawn to A.F.O. 981/39 regarding the return of medical stores to the R.N. Medical Depôt, Hollycroft, and other Medical establishments, which directs that [illegible] procedure is to be followed in returning unused stores, taking into [illegible]

818.—Total M.179.—Medical Officer's Journal—Compilation

(M.D.G. 7986/40.—11/11/1940.)

[illegible] the following notes in amplification of the instructions issued with the Medical Officer's [illegible] guide for the guidance of Medical Officers of ships and establishments [illegible] cases carried from ships not carrying a Medical Officer, the name [illegible] the case is recorded in a notebook to be checked against the patients [illegible] in the Alphabetical Sick List (M.179G).

[illegible] the application of these notes to all from other ships or establishments whilst [illegible] the sick list.

[illegible] ship or establishment which the case has been discharged is [illegible] the appropriate column of the Alphabetical Sick List.

[illegible] Alphabetical Sick Lists are to be recorded in the Journal for the personnel [illegible] groups:—

R.N., R.M., R.N.V.R., R.N.R., R.F.R.
R.F.A. [illegible] serving under T.124 agreements, naval staff.
W.R.N.S. (in A.F.O. 1/40).
[illegible]

[illegible] in accordance with the instructions in M.179 (D) and M.179 (E).

[illegible] vessel is transferred from one Station or Flotilla [illegible] NOT be transferred from each Station or Flotilla [illegible] Sick Lists should be kept up to date.

(A.F.O. 1/2/40.)

883.—Disposal of Service Respirators of Invalids

(M.D.G. N. 10340/40.—12/2/1940.)

[illegible] Service respirators in the depots.

[illegible]

Medical Naval Officers

[illegible]

863.—Medical Officers, R.N.V.R. (Permanent and Temporary)—Transfer to Permanent List, R.N.

(C.W. 7611/40—14.3.1940.)

It is expected that after the war a number of Medical Officers of R.N.V.R. (temporary and temporary) will be allowed to transfer to the Permanent List of the Royal Navy.

It is not expected that it will be possible to define the conditions under which transfer will take place of the war. Non-Medical Officers may be allowed to apply for transfer (personally) [illegible] to the Permanent List.

Such Officers should report that they are willing to accept the conditions though the usual Service channels together with reports on the Officers concerned to the Permanent Service.

4. Such reports should include details of the resident appointments held by Officers in hospitals.

576.—Women's Royal Naval Service—Discharge of Officers and Ratings

(C.W. 7384/40—2.2.1940.)

The discharge of an officer W.R.N.S. for any reason is to be submitted by the Superintendent W.R.N.S. through the Commander-in-Chief or Naval Officer in Charge of the Establishment to the Admiralty, where a decision will be given. The [illegible] will [illegible] the W.R.N.S. officer to be suspended without pay pending the decision.

Should a W.R.N.S. officer [illegible] be considered by the medical officer [illegible] [illegible] to be entitled to [illegible] [illegible] Superintendent W.R.N.S. [illegible] 14 days. During the [illegible] the member [illegible] W.R.N.S. [illegible] W.R.N.S.

The Superintendent W.R.N.S. [illegible] pay shall stop with the following exceptions of [illegible]

34.—Maternity Hospital for the Wives of Officers—Facilities at Fulmer Chase Hospital, Slough, Bucks.

(C.W. 8638/39—4.1.1940.)

Fulmer Chase Hospital, Fulmer, Slough, Bucks, is reserved for the wives of officers of the Navy, Army and Air Force, whose commissions in war time [illegible] hospital specially [illegible] in the hospital customs, which differs from the charge of a [illegible] Medical Officer in the hospital [illegible] facilities. The matron [illegible] [illegible] [illegible] [illegible] nurses.

[illegible] 14 [illegible] work in wards for three to five patients. [illegible] [illegible] [illegible] slightly higher rates. There is [illegible] [illegible] [illegible] diseases.

[illegible] patients [illegible] maternity patients [illegible] [illegible] [illegible] hospital [illegible] to be addressed to the Secretary, [illegible]

OBITUARY

[illegible] deaths and [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] R N Hospital Haslar [illegible] in the Mediterranean [illegible] Commander [illegible] passed through the [illegible] 1923 when [illegible] R N [illegible] Officer [illegible] *Impregnable* in the [illegible] in 1928 he [illegible] back in [illegible] Barracks Paris [illegible] Captain [illegible] then [illegible] Hospital Plymouth [illegible] Fleet [illegible] appointed in 1932 to H M S *Kent* in the China Station. In 1937 he went to R N Hospital Haslar where he remained until the outbreak of the Great War at which time he became S M O at H M S *Pembroke* and at his most considerable period of service. In [illegible] to the Mediterranean [illegible] 1941 he took a course of surgical skill of R N Hospital Chatham and in 1942 he joined S M O at the surgical skill of R N Hospital [illegible] He was placed on the Retired List with the rank of Surgeon Rear Admiral on [illegible] 1945 having reached the age limit.

Surgeon Rear Admiral Redd was awarded the O B E for his services in *Pembroke* and the Royal Marines at Deal.

[illegible] regards a punctilious man [illegible] he [illegible] others. He was a disciplinarian who would [illegible] essentials. He [illegible] hand he was [illegible] with his patients and their sensitivities as well as with his junior officers [illegible] highly respected by all with whom he had served in essentials.

He died at Portsmouth on February 28th at the age of [illegible]

HONOURS

[illegible] Lieutenant Colonel M A Graham Yeall M B Ch B and Surgeon Lieutenant [illegible] M R C S L R C P were awarded the O B E on January 1940.

Lieutenant A J R Sheridan R N has been awarded the D S C for services in [illegible]

Commander [illegible] Cussen R N (H M S *Exeter*) and Surgeon Lieutenant [illegible] A J Burdon R N (H M S *Lyme*) have been mentioned in despatches for [illegible] Battle of the River Plate.

Lieutenants C [illegible] Hunter R N (H M S *Achilles*) and R W G Lancaster R N (H M S *Exeter*) have been awarded the D S C for services in the Battle of the River Plate.

Captain T B Dixon V D H N V R has been promoted Honorary Physician [illegible] and resigned to Surgeon Captain L S Adcraft V D H N V R

RETIREMENTS ETC

[illegible] Colonel C Wright M R C S L R C P placed on the retired list (medically [illegible] 1941

[illegible] Commander R B Hobbs O B E M B Ch B placed on the retired list [illegible] September 29 1939

[illegible]

PROMOTIONS

[illegible] Lt Cdr W E S Lockhart, M B E [illegible] Commander [illegible] 1939

Surgeon Commander E I M Kelly, M B, R N [illegible] Surgeon Commander [illegible] 1939

Surgeon Lieutenant-Commander D Wright, M B, B Ch, R N V R [illegible] M B, Ch B, and D P Gorst, M B, B Ch, to be Surgeon Lieutenant-Commander [illegible] December 20, 1939

Surgeon Lieutenant-Commander J G Morris Nicholl, B Ch, to be Surgeon Lieutenant-Commander October [illegible]

Surgeon Lieutenant-Commander M B Mulcaster, M B, Ch B, to be Surgeon Lieutenant-Commander December 31, 1939

Surgeon Commander R A W Ford, I R C P & S, to be Surgeon Captain December 1, 1939

Surgeon Commander C E M Gimblette, M B, B Ch, M R C S, L R C P, to be Surgeon Captain December 31, 1939

Surgeon Commander W J Berrard, O B E, M B, B Ch, F R C P, R N (Retd), to be Acting Surgeon Captain September [illegible] 1939

Surgeon Lieutenant-Commander A D Sinclair, M B, Ch B, to be Surgeon Commander January [illegible] 1941

Surgeon Lieutenant-Commander A N Forsyth, M B, Ch B, to be Surgeon Commander February 17, 1940

Surgeon Lieutenant-Commander A J Moirle, M B, Ch B, to be Surgeon Commander March 18, 1940

Surgeon Lieutenant (D) H C Leighton, M B, L D S, to be Surgeon Commander (D) December 31, 1939

Surgeon Lieutenants (Temporary) M B, B S, M R C S, L R C P, and B S Lewis, M R C S, L R C P, to be Surgeon Lieutenant-Commanders (Temporary) June 1, 1940

Surgeon Lieutenant (Temporary) H L Allen, L R C P & S, L D S, to be Surgeon Lieutenant-Commander (Temporary) April 14, 1941

Surgeon Lieutenant (Temporary) H G Hurgwell, M B, B Ch, to be Surgeon Lieutenant-Commander (Temporary) October 9, 1936

Surgeon Lieutenant (Temporary) F Bush, B Ch, M R C S, L R C P, to be Surgeon Lieutenant-Commander (Temporary) May 17, 1941

Surgeon Lieutenant (D) A Muir Watson, L D S, to be Surgeon Lieutenant-Commander (D) January 2, 1941

ENTRIES

Mr [illegible] Weekly, L D S, F R C S, entered as Temporary Surgeon Rear Admiral [illegible] Surgeon, September 3, 1939

Mr R V Hillends, O B E, M B, entered as Temporary Surgeon Rear Admiral (ns) Commanding Training, September 1, 1939

Mr [illegible] Graff, M C, L D S, entered as Temporary Surgeon Rear Admiral (ns) [illegible] Training, September 3, 1939

Dr J W M Sc[illegible], B S, L D S, C, M B, L R C P, entered as Temporary Surgeon Rear Admiral [illegible] Training, September 3, 1939

[illegible]

TRANSFERS TO PERMANENT LIST

[illegible]

WARDMASTERS

RETIREMENTS AND RESIGNATIONS

[illegible]

PROMOTIONS

[illegible]

ROYAL NAVAL VOLUNTEER RESERVE

RETIREMENTS AND RESIGNATIONS

[illegible]

Messrs H C M[illegible] MB BCh J Stratto MB ChB [illegible] Mi[illegible] ChB A H Boshe MRCS LRCP L Brown MRCS LRCP [illegible] MB BCh J W Ru[illegible] MB ChB A I Whyh MB ChB G H Gubb MB BS MRCS LRCP G Yungmann FRCS S M [illegible] MB BCh MRCS LRCP [illegible] Lewy MB ChB H I Griffiths MRCS LRCP J H J Ferrum MRCS LRCP J F Wilson MB ChB [illegible] Wells MB ChB L K [illegible] MB F Ch MRCS LRCP [illegible] MB BS MRCS LRCP H A Wilton MRCS LRCP C H Wally BM BCh C A Clark MB MRCP F S Foste MRCS LRCP [illegible] Smart MB BS MRCS LRCP [illegible] entered as Temporary Surgeon Lieutenants September 6 1939

Mr A H D O Richmond MB ChB entered as Temporary Surgeon Lieutenant Sept ember 18 1939

Mr C H Terry MRCS LRCP BM BCh FRCS entered as Temporary Surgeon Lieutenant Sept ember 21 1939

Temporary Commander I G Willis MRCS LRCP RN (Retd) entered as Temporary Surgeon Lieutenant September 21 1939

Messrs I D Arch MRCS LRCP and A S R Ham MB BCh MRCS LRCP H H entered as Temporary Surgeon Lieutenants September 27 1939

Messrs W W Waldman MB ChB D H H and S J H Miller MB ChB entered as Temporary Surgeon Lieutenants September 28 1939

Messrs D Hay MD ChB D W C Cox MRCS LRCP and D C S H H MRCS LRCP entered as Temporary Surgeon Lieutenants Sept ember 1 October 2 and September 9 1939 respectively

Messrs C H Gibson MD ChB F T Delman MRCS LRCP G E Lewis MB BCh MRCS LRCP and T L S Ferguson LRCP &S entered as Temporary Surgeon Lieutenants October 6 1939

Mr L G Bird MB ChB entered as Temporary Surgeon Lieutenant October 5 1939

Mr E M Hen Idsen MB ChB entered as Temporary Surgeon Lieutenant October 9 1939

Mr J E Strutters MB ChB entered as Temporary Surgeon Lieutenant October 1 1939

Mr E I Neill MB BCh entered as Temporary Surgeon Lieutenant October 11 1939

Messrs J Davies MD MRCP S I L Tatlin MD MRCP G A Stephenson MB DPM G C Tooth MRCS LRCP and H Scott Forbes MRCS LRCP DPM entered as Temporary Surgeon Lieutenants

Messrs R A DuVal MB BS J H Simpson MB BS I M Wedderspoon MRCS LRCP W B Spring MB ChB H I Ball MB ChB MRCS LRCP A R Unsworth MB ChB and P R Pepper BM BCh MRCS LRCP entered as Temporary Surgeon Lieutenants November 27 1939

Messrs W E Starkey LDS E E R Simpson LDS S H Bell BL LDS and W S Major LDS entered as Temporary Surgeon Lieutenant (D) December 6 1939

Messrs J D Hughes MB ChB J L A Hackett MB MRCS LRCP The Ben Anthony Gulbern Gulbrie Hardy MB ChB and I McB Rasdall MRCS LRCP entered as Temporary Surgeon Lieutenants October 6 1939

Messrs A McW Brown MB ChB S L Lind MB ChB A H Heffin MB ChB LRCP &S A C Jeffry MRCS LRCP W B H Mills MB ChB E Ashman MRCS LRCP M Mumbleton MRCS LRCP M Curran MRCS LRCP W F Andrews MRCS LRCP A L Schofeld MB ChB I H Brown MB BS MRCS LRCP J F Ryan MB MRCS LRCP and A H Lewis MRCS LRCP entered as Temporary Surgeon Lieutenants October 1939

Mr G I Murray MD entered as Temporary Surgeon Lieutenant October 11 1939

Mr G H C Sl G Griffiths entered as Temporary Surgeon Lieutenant October 25 1939

Messrs A V Lavith MB ChB I R Blur MB ChB A I Lan MB ChB T O Mason MRCS LRCP S I H Ferguson MB ChB H G Knight MRCS LRCP T Tucker LRCP &S F G Mutland MRCS LRCP and W A Robson MB ChB entered as Temporary Surgeon Lieutenants November 2 1939

Mr A M Barry MB BCh entered as Temporary Surgeon Lieutenant November 1 1939

Mr D S Macphol MB ChB entered as Temporary Surgeon Lieutenant November 21 1939

Messrs F R I Davies MRCS LRCP I G Bryson LRCP &S D F Heath MRCS LRCP B A H Hamilton MB MRCS LRCP I W Ashley

[illegible] M B H A [illegible] L M [illegible] D [illegible] L F [illegible]
N J H [illegible] L R C P M [illegible] M G [illegible]
R Jackson M B P B [illegible] Regal Yr [illegible]
and J W H Glyn M B [illegible] [illegible]

Messrs A N C Morgan M [illegible] [illegible] M B [illegible]
Egypt M S C B entered [illegible] [illegible]
Division August 3 1939

Mr D H Anderson M B B [illegible]
Hunter Division August 23 1[illegible]

Mr S M Jonker M R C S [illegible]
Contingent September 9, 1939

Messrs R Rhydwen M B M [illegible] A [illegible] M [illegible]
bert M B C h B H H C [illegible] [illegible] H M [illegible]
G N Dawson M H R [illegible] M B Ch B M B [illegible] Rd [illegible]
W B H Jebb M B Ch B [illegible] M B H B H W [illegible]
H L C Bradford M B Ch B M R C S L R C P [illegible] Metropolitan [illegible]
E T Yates M B Ch B [illegible] Surgeon Lieutenant [illegible]

Messrs H P Cobley M R C S L R C P [illegible] D B Hick M B H B H [illegible]
M D M R C S L R C P [illegible] M B H B [illegible] M Vin [illegible]
H I Curl M R C S L R C P M B H [illegible] L B [illegible] M B H B
M B Ch B E H Moors M B [illegible] B E W [illegible] M R C S L R C P [illegible]
Morgan M B M R C S L R C P [illegible] M [illegible] L R C P & S [illegible]
Surgeon Lieutenants December 1[illegible] 19[illegible]

Messrs J M L Price M R C S L R C P K S Murdoch M B B Ch M R C S
L R C P N H H Mcfallon M B Ch B M R L Abbot L R C P & S H Hawkins
L R C P & S R Woolstencroft M R C S L R C P W A H Cooper M B B S L R C P
Mason M B Ch B B W Watts M B B S M R C S L R C P J C Nicholson
M B B Ch B S Thackrah M B B S L R C P Sophia M R C S L R C P [illegible] A L H [illegible]
Wynne M B Ch B M R C S L R C P [illegible] Temporary Surgeon Lieutenants
December 22 1939

Mr L A Hobson M B Ch B H H [illegible] Temporary Surgeon Lieutenant [illegible]
January 1 1940

Mr H H Pavire D M B B Ch [illegible] Temporary Surgeon Lieutenant Engineers S L F

Messrs T L Bird M B B Ch W A Br[illegible] M R C S L R C P & S [illegible] A
Roberts M R C S L R C P entered as Temporary Surgeon Lieutenants December
1939

Mr A P McDougall M B Ch B D H H entered as Temporary Surgeon Lieutenant
December 30 1939

Messrs H L Trestrail Carey B M B Ch and N A Barr L M R C P C H D H
M R C S entered as Temporary Surgeon Lieutenants January 10 1940

Messrs A S Nicol M B Ch B and G H F Mackel M B Ch B entered as Temporary Surgeon Lieutenants December 27 1939

Messrs G H Beresford M B B Ch M R C S L R C P [illegible] Burdal M B H B
and I Sandilands M B Ch B entered as Temporary Surgeon Lieutenants December
1939

Mr R N Martin M B B Ch entered as Temporary Surgeon Lieutenant [illegible]
1940

Mr J H Binns M B B S M R C S L R C P entered as Temporary Surgeon
Lieutenant January 10 1940

Mr L G P Stirrs M R C S L R C P [illegible] as Temporary Surgeon Lieutenant
January 5 1940

Mr A J Ward M R Ch B entered as Temporary Surgeon Lieutenant January
1940

Mr P N Holmes M B Ch B M R C S L R C P entered as Temporary Surgeon
Lieutenant January 1 1940

Mr H E Longuehaye M R C S L R C P entered as Temporary Surgeon Lieutenant
January 15 1940

Mr V G C Mason M R C S L R C P entered as Temporary Surgeon Lieutenant
January 15 1940

Mr R W V Simmons B M B Ch entered as Temporary Surgeon Lieutenant
January 15 1940

Mr E W Ambrose M B M R C P D T M entered as Temporary Surgeon Lieutenant
January 1 1940

Messrs D H I Hugh M B B Ch and F C Powell M R C S L R C P [illegible]
as Temporary Surgeon Lieutenant [illegible] 1940

[illegible] H B [illegible] MB BCh MRCS LRCP [illegible] Surgeon Lieutenant February 3 1940

Messrs A W McHardy MB ChB and I B Sutton MRCS [illegible] Temporary Surgeon Lieutenants February 13 1941

Mr I Weir MB ChB [illegible] Probationary Temporary Surgeon Lieutenant [illegible] 1940

Mr A Douglas MB ChB [illegible] as Probationary Temporary Surgeon Lieutenant [illegible] 20 1940

Messrs H F Crick MRCS LRCP [illegible] Probationary Temporary Surgeon Lieutenants [illegible] 1940

Messrs [illegible] Fitzgerald MB ChB G H Sequ MB CIB [illegible] MB [illegible] Gillespie MB BS [illegible] Lieutenants January 30 1940

Messrs J M Wilson MRCS LRCP and A E Shirvall MB ChB MRCS LRCP [illegible] as Probationary Temporary Surgeon Lieutenants February 1 1940

Messrs J C Ballantyne MB BS MRCS LRCP R B Mitchell MRCS LRCP MB ChB [illegible] and N I Hale MB ChB [illegible] Temporary Surgeon Lieutenants February 20 1940

Mr R D Kerr MB ChB [illegible] as Probationary Temporary Surgeon Lieutenant February 23 1940

Messrs W T Ellis LMSSA and I S H Bain MB ChB [illegible] as Probationary Temporary Surgeon Lieutenants March 1 1940

Messrs J F Donovan MRCS LRCP R K Bentley MB ChB A K [illegible] MB ChB [illegible] Williams MRCS LRCP MB BS [illegible] MB ChB B K Bray MRCS LRCP MB BCh [illegible] Edwards MRCS LRCP and A P Pollard MRCS LRCP MB [illegible] as Temporary Surgeon Lieutenants March 1 1940

Mr T D Pohlar MRCS LRCP [illegible] as Probationary Temporary Surgeon Lieutenant March 4 1940

Mr I Bain MB ChB [illegible] as Probationary Temporary Surgeon Lieutenant March 8 1940

Messrs I Mackintosh MB ChB I A Smith MB ChB [illegible] A I C Hughes MRCS LRCP MB BCh [illegible] as Probationary Temporary Surgeon Lieutenants March 1 1940

Messrs J H F Stamphill MRCS LRCP A I Marshall MB ChB and I Mackay LRCP & S [illegible] as Probationary Temporary Surgeon Lieutenants March 1 1940

Mr N Wall as MB ChB [illegible] as Probationary Temporary Surgeon Lieutenant March 1 1940

Messrs J H Kyle MB BCh and A H Ziz MRCS LRCP MB BCh [illegible] as Probationary Temporary Surgeon Lieutenants March 8 1940

Mr D M Morrisey MB BCh [illegible] as Probationary Temporary Surgeon Lieutenant March 11 1940

Messrs H A Andrews MB BCh MRCS LRCP A S B McNeil MB ChB J B Garratt MRCS LRCP H J Bradshaw MB BCh and P J Byrne LRCP & S [illegible] as Probationary Temporary Surgeon Lieutenants March 1 1940

Mr I Louse MRCS LRCP [illegible] as Probationary Temporary Surgeon Lieutenant March 6 1940

Mr T S Stewart MB ChB [illegible] as Probationary Temporary Surgeon Lieutenant March 19 1940

Messrs I C P Bedford H D H H A Harrison LDS [illegible] A B Widdowson [illegible] as Temporary Surgeon Lieutenants (D) December 19 1939

Messrs H Zemi DDS [illegible] A Johnson LDS A McEntyre LDS and D M H Jones LDS [illegible] as Temporary Surgeon Lieutenant (D) December 28 1939

Messrs W T McFadyean LDS H D Hill LDS C F A Mean RDS I W W Evans LDS W Hodgson LDS E W King Finney LDS B I O Mean LDS A H Adcock LDS and W K Wright LDS [illegible] as Temporary Surgeon Lieutenants (D) January 19 1940

PROMOTIONS

Surgeon Lieutenant Commanders H A Imp MB BMBH LDS A S Brodhaw MB ChB H M Pitty MB ChB H Lal H Winstanley LMSSA R I Matthews MD BCh M&H H H E A Gerard MB MRCS LRCP F F Stalker MD FRCS I B Hutchison FRCS A W Imrie MB MRCS

[illegible] Hoyt, MB, MRCP, [illegible] W. Hoyt, MB, [illegible] H. [illegible] Lord, [illegible] Hughes, [illegible] Lewis, [illegible] Hughes, [illegible] Great, [illegible] Hughes, MB, [illegible] Murphy, MB, [illegible] Ch[illegible] [illegible] Smith, [illegible] 1939 (at [illegible]

[illegible] Hughes, [illegible] to be Surgeon-Lieutenant [illegible] 1939

[illegible] Lieutenant H. N. B. Cruikshank, BM, BCh, [illegible] 6 1939

[illegible] Lieutenant P. A. B. Houghton, [illegible] to be Surgeon-Lieutenant [illegible] 1939

[illegible] Lieutenant W. J. Campbell, MB, CB, [illegible] W. G. Gill, MB, [illegible] Hughes, MB, [illegible] Hubbard, EM, BCh, MRCP, [illegible] MB, [illegible] to be Lieutenant, MB, [illegible] Hayes, MB, [illegible] Ch, [illegible] Lyons, MB, [illegible] Meyer, MB, [illegible] J. N. [illegible] MRCS, [illegible] Wolfe, MB, [illegible] G. [illegible] MRCS, [illegible] H. N. B. Cruikshank, BM, MRCS, [illegible] November 6, 1939

[illegible] Surgeon-Lieutenant [illegible] Hyde, MB, MRCS, [illegible] Surgeon-Lieutenant-Commander [illegible] November 6, 1939

[illegible] Surgeon-Lieutenant-Commander [illegible] Dunn, MB, MRCP, [illegible] Surgeon-Lieutenant-Commander [illegible] G. A. Stephens, MB, BCh, M, [illegible] G. C. Leah, MB, [illegible] MRCS, LRCP, BCh, M, to be Acting Surgeon-Lieutenant [illegible] November 6, 1939

[illegible] to be Lieutenant (D) A. H. Bateman, MB, CB, BDS, [illegible] 1939

[illegible] to be Lieutenants A. H. Lyon, G. L. Ward, [illegible] H. Mills, [illegible] Ward, H. W. Smith, [illegible] Hardy, [illegible] N. Gow, [illegible] H. & Charles, [illegible]

[illegible] Lieutenant D. I. N. Mc[illegible] to be [illegible] 1937

[illegible] Lieutenant R. L. Hoppe, [illegible] promoted [illegible] 1939

[illegible] Lieutenant E. I. [illegible] promoted [illegible] 1938

[illegible] Lieutenant R. C. [illegible] promoted [illegible] 1938

[illegible] Lieutenant [illegible] promoted [illegible] 1938

[illegible] Lieutenant H. A. N. [illegible] promoted [illegible] 1938

[illegible] Lieutenant P. [illegible] promoted [illegible] 1938

[illegible] Lieutenant A. L. [illegible] promoted [illegible] 1938

[illegible] Lieutenant R. I. Quill, [illegible] promoted [illegible] 1938

[illegible] Lieutenant D. C. [illegible] promoted [illegible] 1938

[illegible] Lieutenant H. Stapleton, [illegible] promoted [illegible] 1938

[illegible] Lieutenant A. V. [illegible] promoted [illegible] 1938

[illegible] Lieutenant P. [illegible] promoted [illegible] 1938

[illegible] Lieutenant A. Chapman, [illegible] promoted [illegible] 1938

[illegible] Lieutenant T. H. H. [illegible] promoted [illegible] 1938

[illegible] Lieutenant D. G. [illegible] promoted [illegible] 1938

[illegible] Lieutenant [illegible] promoted [illegible] 1938

[illegible] Lieutenant H. A. H. [illegible] promoted [illegible] 1938

[illegible] Lieutenant H. W. [illegible] promoted [illegible] 1938

[illegible] Surgeon-Lieutenant A. [illegible] Hughes, MB, BS, LRCP, [illegible] 1938

[illegible] Surgeon-Lieutenant H. B. Roberts, MB, CB, [illegible] A. [illegible] Mc[illegible] Surgeon-Commander, Decorated, H. 1939

[illegible] W. C. Campbell, MB, CB, BDS, LRCS, [illegible] February 1, 1939

[illegible] (D) [illegible] Pinder, [illegible] BDS, [illegible] Lieutenant-Commander [illegible] 1939

[illegible] Lieutenant H. [illegible] W. [illegible] MB, LRCP, LRCS, [illegible] Acting Surgeon-Lieutenant [illegible] November 6, 1939

[illegible] Lieutenant, MB, ChB, to be Surgeon-Lieutenant [illegible] 1939

Surgeon-Lieutenant (D) [illegible] BDS, to be Surgeon-Lieutenant-Commander [illegible] March 24, 1939

[illegible]

QUEEN ALEXANDRA'S ROYAL NAVAL NURSING SERVICE

RETIREMENTS

Miss [illegible] is Nursing Sister to probation [illegible]

PROMOTIONS

Senior Sister Miss [illegible] to be Acting Superintendent Sister [illegible]

Superintendent Sister [illegible] to be Acting Superintendent Sister [illegible]

Matron [illegible] to be Matron [illegible]

Superintending Sister [illegible] to be Superintending Sister [illegible] 1940

Acting Superintending Sister [illegible] to be Superintending Sister [illegible] 1940

Nursing Sister [illegible] to be Acting Superintending Sister [illegible] 1940

Nursing Sister [illegible]

Miss [illegible] Sister Miss [illegible] 1940

RESIGNATIONS

Sister Superintendent Miss A. M. E. Northcott superannuated [illegible]
Nursing Sister Miss M. E. Evans resigned October 9, 1939
Nursing Sister Miss G. Acheson resigned November 15, 1939
Nursing Sister Miss F. Deleday resigned December [illegible] 1939
Nursing Sister Miss M. M. Russell resigned January 1, 1940
Nursing Sister Miss I. Lang resigned January 15, 1940
Matron in Chief Miss H. M. Martin R.R.C. superannuated March 9, 1940
Nursing Sister Miss W. M. Barker resigned February 28, 1940
Nursing Sister Miss M. Booth resigned December 18, 1939
Nursing Sister Miss V. H. McEwen resigned January 17, 1940

JOURNAL OF THE ROYAL NAVAL MEDICAL SERVICE

Balance Sheet, 1939

Assets	£	s.	d.	Liabilities	£	s.	d.
Balance in Bank, Dec. 31, 1939	88	12	6	Nil			
£100 4½% Conversion Loan	100	0	0	Balance Credit	788	12	6
£600 3½% War Loan	600	0	0				
	£788	12	6		£788	12	6

Presented at the Annual Meeting of the Management Committee held on January 15, 1940.

(Sd.) L. WARREN
Surgeon Rear Admiral

(Sd.) H. E. BRIGGS
Surgeon Captain R.N.
Manager and Joint Editor

Notices.

NAVAL MEDICAL COMPASSIONATE FUND

At the Quarterly Meeting of the Directors of the Fund held on January [illegible] 6, [illegible] Surgeon Vice Admiral Sir Percival Nicholls, K.C.B., K.H.P., M.D., [illegible] Surgeon General to the Navy, in the Chair, four cases were considered and [illegible] the applicants. The following is a summary of the cases [illegible]

[illegible] aged 64, of an Army Surgeon who died in 1878. The [illegible] was left [illegible] of running their own home, and their joint [illegible] insufficient to provide for the cost of maintenance, attendance [illegible] and is invalid from the Naval Medical Compassionate [illegible] funds, £1,280.

[illegible] Surgeon who died in 1866. Lives with her sister [illegible] dependent on grants received from charitable bodies.

NAVAL MEDICAL COMPASSIONATE FUND

Account of Receipts and Payments for the year ending December 31, 1939

	£ s d	£ s d
Balance at Bank on January 1, 1939		
Current Account	18 [illegible] 8	
Deposit Account	163 11 11	
		181 15 6
Dividends on £[illegible] Consolidated Stock		
Interest on £[illegible] Stock	66 11 1	
Interest on £[illegible] Consolidated Stock	33 [illegible] 1	
Interest on £[illegible] War Loan	[illegible] 1	
		330 [illegible] 1
Donations		[illegible]
Subscriptions		
For 1938	8 [illegible] 0	
Arrears	24 [illegible] 0	
Advance	[illegible] 1 0	
		264 11 1
Transfer from Deposit Account		13 [illegible]
		£[illegible]

	£ s d	£ s d
Awards to Orphans and Widows	96 [illegible] 0	
Secretary's Allowance	13 0 0	
Audit fee	[illegible] 1	
Subscription unexpired and transferred to Deposit Account		[illegible] 1 1
Sundries		[illegible]
Transfer of Stock to names of new trustees		10 [illegible]
Balance at Bank on December 31, 1939		
Current Account	£ 38 [illegible] 10	
Deposit Account	[illegible]	
		18 11 10
		£[illegible]

[illegible] Consolidated Stock [illegible]

† [illegible] Consolidated Stock [illegible]

‡ [illegible] War Loan [illegible]

[illegible] Auditor [illegible]

(Sd.) D. ABERNE

(Sd.) C. V. GRIFFITHS
Surgeon Rear Admiral
Honorary Treasurer
January, 1940

[illegible]

TABLOID EMOCIN THERAPEUTIC [illegible]

[illegible]

SUBOLIN

[illegible]

ATTACHE

[illegible]

VOLUME XXVI JULY 1940 No. 3

Journal

of the

Royal Naval Medical Service.

Articles.

SOME OBSERVATIONS ON THE INVESTIGATION OF A CASE OF P.U.O.

By Surgeon Commander R. L. G. PROCTOR, M.A., M.D., F.R.C.P.(I), D.P.H., R.N.
R.N. Hospital, Haslar.

This is the well known label given to febrile conditions that have not yet been diagnosed. Whether it means "pyrexia of uncertain origin" or "pyrexia of unknown origin" depends mainly on the mental make-up of the medical man dealing with the case.[1] Some practitioners are never observed to be investigating the "unknown" but only the "uncertain," while others who are much more modest and whose knowledge is much more thorough and extensive seem constantly to be up against the "unknown."[1]

A pyrexia without pathognomonic signs may occur in the following: tuberculosis, typhoid fever, Salmonella bacilli causing enteric fever, Salmonella bacilli causing food poisoning, dysentery bacilli, bacteria causing undulant fever (often known as brucellosis), subacute bacterial endocarditis, malignant (ulcerative) endocarditis, influenza, glandular fever (infective mononucleosis), septicæmia, pyæmia, toxæmia, pyelitis and other urinary infections, dental sepsis, sinusitis, hepatic diseases such as Hodgkin's disease, acute leukæmias, & spirochætal fevers, early pneumonia, some suppurative conditions such as abscess due to osteomyelitis, retroperitoneal suppuration, interlobar empyema, perinephric abscess, & malaria, kala-azar, & pyrexia from hepatic secondaries, and in other conditions.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Tuberculosis [illegible]

Tuberculosis of the Peritoneum [illegible] is rather difficult. It has [illegible] and loss of patient [illegible] shifting dullness be present [illegible] mulberry cancer with ascites [illegible] coccal peritonitis may be [illegible] tuberculous peritonitis [illegible]

[illegible]

This disease has so many types [illegible] unless of course there is [illegible] type with its not very clear [illegible] may have pneumonic or pleuro [illegible] intestinal type.

In a true influenzal [illegible] cytosis. If complications [illegible] place of the previous leucopenia [illegible] between the gastro intestinal type [illegible] both diseases there is a leucopenia [illegible] reaction would be of great service [illegible] later it is positive.

[illegible]

Acute and chronic leukemia [illegible] Pernicious anemia may be fatal [illegible] The Pel Ebstein type of Hodgkin's [illegible] count including reticulocytes should be [illegible] of blood films.

Glandular Fever.—Usually diagnosed by glandular [illegible] Blood changes showing lymphocytosis 60 and 80 per cent of [illegible] with 10,000 to 15,000 white corpuscles. No change is noted [illegible] Heterophile agglutinins are present. Paul Bunnell reaction [illegible] titre is 1/64. Differential diagnosis from acute [illegible] Blood culture [illegible] help.

Septicæmia Bacterial Endocarditis.—The typical pyæmic [illegible] difficult to diagnose but [illegible] which provide [illegible] signs [illegible] and thrombosis [illegible] in which [illegible] Blood culture is the most [illegible] and [illegible] is the culture is negative in the [illegible] has been [illegible] bacteræmia period. Most the *Streptococcus* [illegible] may [illegible] and repeated [illegible]

Typhus

Surprisingly rare, especially as regards enteric. Rigors [illegible] Leucocytosis [illegible] with local suppuration.

[illegible] and may reach 104° F. [illegible] Urine [illegible] and usually contains pus, epithelial cells [illegible] Hyaline and granular casts may also be present. The urine should be examined [illegible] commonly and more specially and cultures [illegible]

[illegible] Differentiated from septicæmia, malaria, &c. [illegible] enteric.

Malaria

[illegible] cases of malaria may occur in the Service. The [illegible] blood films during the screening stage as parasites [illegible] Thick and thin blood films should be made the [illegible] parasites are scanty and the latter [illegible] Parasites usually be fairly easily located in [illegible] before a pyrexial period. The blood films should be stained by [illegible] or one of the other Romanowsky stains. [illegible] per cent, [illegible] high percentage of large mononuclear [illegible] 20 per cent. [illegible] in serum containing [illegible] blood pigment. A blood plasmodium [illegible] blood cell may [illegible] malarial parasite. The parasite is prone in [illegible] the blood film and is always rise to exacerbations [illegible] Quinine [illegible] should never be given [illegible] as the parasites disappear very rapidly from the blood after [illegible] administration.

SPIROCHAETAL [illegible]

[illegible] fevers. Weil [illegible] the [illegible] is made by [illegible] by [illegible] and the [illegible] disease [illegible] about 60 per [illegible]. The [illegible] examine [illegible] when stained [illegible] inocul[illegible] in the [illegible] be [illegible] able [illegible] twentieth day [illegible] diagnosis [illegible] *B*[illegible] in the [illegible] is suffering [illegible]

In [illegible] and the [illegible] examined by the [illegible] the *Spir*[illegible] can be seen. [illegible] the organism [illegible] of [illegible] in the paper.

[illegible]

Caused by [illegible] *melitensis* and *Br.* [illegible] percent[illegible] tend [illegible] blood [illegible] made [illegible]

S[illegible] the [illegible]

S[illegible]

Bl[illegible] The [illegible] is [illegible] c[illegible] should [illegible] liable [illegible]

[illegible]

[illegible] is regarded as [illegible] It is found in [illegible] fever influenza [illegible] during the [illegible] chronic infections [illegible] found in agranulocytic [illegible] sulphanilamide lead [illegible] radiation in aplastic [illegible] conditions

[illegible] allergic pruritus e g trichinosis [illegible] pneum e g hay fever [illegible]

[illegible] in which leucopenia is [illegible] lymphocytosis occurs

[illegible] Bacillus [illegible] ella [illegible] [illegible] [illegible]

[illegible] large [illegible]

[illegible] have [illegible]

(1) [illegible]

(2) [illegible]

(3) [illegible]

(4) [illegible]

(5) Blood pressure.

(6) [illegible] &c.

(7) [illegible]

(8) [illegible]

(9) [illegible]

(10) [illegible]

(11) [illegible]

(12) [illegible]

(13) [illegible]

(14) [illegible]

(15) Record of [illegible]

(16) Report [illegible]

(17) [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] and [illegible] appeared to be [illegible]

[illegible] blood for some [illegible] albumination [illegible] tube and on [illegible] present in [illegible] of [illegible] but he [illegible] spirochetes [illegible] negative

[illegible]

[illegible]

[illegible]

early [illegible] in the cold and changeable weather [illegible] lowered [illegible] for people to herd more closely together and neglect [illegible] precautions. Widespread colds, catarrhs and influenza [illegible] and there may be an increase in the carrier [illegible] epidemics.

In [illegible] much exaggerated and especially in this first quiet [illegible] severe weather have conditions favored rapid [illegible].

Run [illegible] attack. Taking up an entirely new mode of life [illegible] training and perhaps unavoidably [illegible] and make shift camps they run a much [illegible] speed. The black-out and the necessity for light [illegible] further difficulties. Opportunity [illegible] and for exchanges of virulence [illegible].

[illegible] the epidemic during the last war [illegible] percentage of carriers and [illegible] years however it has been [illegible] perhaps on account of more [illegible].

[illegible] times pieces [illegible] indication [illegible] but [illegible] subsidiary [illegible] —

[illegible] necessary

[illegible] Group I [illegible] special

[illegible]

[illegible] by [illegible] Many [illegible] New [illegible]

A [illegible] introduction [illegible] man becomes [illegible] there [illegible] and a

limited number of occupants [illegible] the [illegible] selection from group to group. Bed [illegible] should be placed [illegible] part. All living places should be [illegible] and light by day and lighted with [illegible] lamps for use by night. In certain places [illegible] lamps and open windows or scuttles.

Efficient ventilation means adequate [illegible] no stagnation in cubicles [illegible] temperature of a minimum of 2,000 c. [illegible] changes required to achieve this [illegible] of cubic space.

Quarters must be satisfactorily heated, the [illegible] distributed so that the inmates are not obliged [illegible] single fire for warmth. The same [illegible] ventilation must be exercised [illegible] the [illegible] attending church going [illegible] the situation has become [illegible].

Important supplementary measures [illegible] health of the community and [illegible] graduated open air exercise [illegible] properly suited to the weather.

Medical Officers will be [illegible] make known the [illegible] predisposing causes, the mode of transmission, the [illegible] disease in simple talks to officers and men.

Mass gargling with potassium [illegible] procedure is not now undertaken. It should not [illegible] be harmful interfering with the normal protective [illegible] nose and throat. The table [illegible] still *sub judice*. Prophylactic [illegible] lungs [illegible].

Some systematic daily [illegible] organized, however [illegible] possibility must never be forgotten, [illegible] plague febrile illness.

Immediately clinical appearances point [illegible] spinal meningitis, arrangements should be made for sending the patient to a fever hospital. Plenty of fluids and [illegible] sulphapyridine should be given [illegible] and [illegible] made on the hospital case sheet (lumbar puncture, bacteriological examination, &c., are proceeded with later in hospital). The [illegible] recommended is [illegible] (3 c.c.) M. & B. 693. Subdural [illegible]. Helpful points in the

early [illegible]

[illegible]

[illegible]

[

[illegible] Medical Officer.

[illegible]

With [illegible] method of [illegible] as necessary [illegible].

With [illegible] serum treatment [illegible] drug has [illegible] usual method [illegible] adequate [illegible] dine (M & B [illegible]) [illegible] the secondary [illegible] depression and [illegible] sulphapyridine [illegible] orientation and [illegible] of [illegible] pentosuria.

The minimum [illegible] sufficient to [illegible] a concentration of [illegible] per cent. [illegible] days [illegible] biochemically in the cerebrospinal fluid [illegible] concentration [illegible] six days [illegible] to allow any [illegible] during the preceding [illegible]. Patients [illegible] phanamide treatment for adults and the [illegible] recommend the administration of up to 60 grm. [illegible] and spread over nine days as follows:—

For the first three days: From [illegible] 9 grm. in the twenty four hours. (The [illegible] 2 grm. each in dangerous cases.) For the next six days: Six hourly [illegible] gradually reduced to 8 grm. on the fourth day [illegible] on—down to 1 grm. daily on the ninth day. [illegible] toxic effects the [illegible] prolonged beyond [illegible] sufficient in all [illegible] appearance of [illegible] of relapse.

The drug [illegible] the mental disorder [illegible] the patient [illegible]

[illegible]

[illegible]

[illegible]

disease in [illegible] The period of observation [illegible] definite [illegible] in some cases and many [illegible] developed [illegible] which from the same time as the [illegible] have been sent to duty with obviously undamaged hearts [illegible] on whose hearts some suspicion had fallen were [illegible] thought however that an account of the difficulties encountered and the methods adopted in deciding whether or not certain [illegible] per cent may be helpful to other Naval Medical Officers who are [illegible] with similar problems

Owing to the age incidence of acute and subacute [illegible] it will be realized that the large majority of our patients were boys [illegible] training and the questions arising in our minds when deciding [illegible] to return them to duty or not were of necessity these

(1) If the patient has not completed his training is there a reasonable possibility that further training will turn him out physically fit to carry out work however strenuous which he may be called upon to perform in the future?

(2) Is he fit immediately to resume full training with physical drill bayonet fighting &c or would a period of less arduous training as for example the school list in which he only attends lectures and has [illegible] full training later

(3) What is the risk to the patient's heart in resuming his full duty

(4) What will be the psychological and moral effect [illegible] giving him with heart disease

It is obviously not economically sound to train [illegible] only for a short service and therefore in sending a case to a specialist for training one must consider that there is a reasonable probability that he will shortly will be 100 per cent fit In the case of fully trained [illegible] however it may be possible to recommend them for a prolonged period of light duty

The types of case met with for assessment will be grouped in the following groups —

(1) Acute valvular disease

(2) Mitral valve disease

(3) Permanently enlarged heart

(4) Cases in which the history suggests [illegible]

(5) Cases with [illegible] poor response to exercise

Acute Valvular Disease

Aortic Stenosis — Not exemplified in our [illegible] the criteria for such a diagnosis being a systolic thrill and [illegible] area associated with an [illegible] pulse

Aortic Regurgitation—[illegible] further in the [illegible] far more frequently [illegible]

The regurgitant murmur [illegible] the aortic [illegible] left [illegible] is conducted down the left [illegible] in the [illegible] usually the [illegible] that case the [illegible] must be [illegible] physiological [illegible] The murmur [illegible] usually the [illegible] and pulse [illegible] and other [illegible] by them [illegible] a peculiar [illegible] like a note played [illegible] spoken [illegible] empty hall [illegible] be sought with the patient holding his breath but in expiration and then in inspiration because it may only be detected in the one or other phases of breathing Often one finds that the murmur cannot be heard in an ordinary ward with its many sounds of movement [illegible] conversation and traffic but if one returns to the patient after lights [illegible] when it is comparatively quiet the murmur may be found quite easily

Of equal importance in the diagnosis of this condition are the associated physical signs These in practically every case are due to the column of blood running back in the aorta through the imperfectly closed aortic valve Thus we see accentuation and later hypertrophy of the left ventricle the collapsing pulse the impulse of which strikes the finger sharply and immediately recedes as the hammer strikes the strings of a piano For the same reason the typical blood pressure with high systolic and low diastolic readings is found It must be remembered that both pulse and blood pressure may be modified if mitral stenosis or aortic stenosis is also present Arterial pulsation is seen in the neck and a pistol shot sound may be heard if the stethoscope is placed lightly over the brachial artery It should be noted however that this sound may be heard in normal people if the stethoscope is applied lightly over the [illegible] any constriction further up the arm Capillary pulsation must not be [illegible] considered to be diagnostic of aortic regurgitation as it may be found in perfectly normal people

Mitral Valve Disease

Mitral Regurgitation—The diagnosis of mitral regurgitation in the absence of mitral stenosis was very rarely attempted for as Sir Thomas Lewis [illegible] in his [illegible] apical systolic murmurs declares Almost any type of murmur may be heard [illegible] and at autopsy no fault may be found with the mitral [illegible] ring The valve may be defective or the ring may be [illegible] and there may be no murmur The diagnosis of mitral regurgitation

[illegible] the influence of the [illegible] [illegible] more [illegible] where [illegible] special of being the [illegible] [illegible] the history [illegible] [illegible] Our [illegible] [illegible] the murmur which [illegible] [illegible] present [illegible] [illegible] appears [illegible] [illegible] junction [illegible] signs of [illegible] [illegible] definite evidence [illegible] the murmur.

Mitral Stenosis.—It is generally agreed that [illegible] least three years [illegible] when physical signs can [illegible] fully developed condition does not manifest itself [illegible] the original damage to the valve. It will be seen that [illegible] tion found among our patients must have originated [illegible] rheumatism often in the case of children at some time [illegible] Service.

The physical signs of the fully developed condition are [illegible] easy to recognize. Typically, an apical presystolic thrill [illegible] found; the latter starting in diastole and ending in [illegible] sound is rough rumbling and crescendo in character. [illegible] more advanced a diastolic murmur may be present as well [illegible] may be present alone. This murmur resembles the [illegible] already described may be [illegible] localized often being heard [illegible] about an inch internal to the apex but [illegible] can be [illegible] by one bell of a stethoscope. The mitral diastolic murmur [illegible] diastole than does the tricuspid murmur in [illegible] more rumbling in character. It may be likened to the [illegible] which distinguishes when passing [illegible] of mitral stenosis vary greatly with the [illegible] searching for thrill it should be [illegible] standing with the arms outstretched behind [illegible] side and in the same position after exercise [illegible] six times in equal succession as the murmur is only [illegible] these circumstances. One of [illegible] well. While standing, apical generalized [illegible] lying down an apical diastolic murmur appeared and the [illegible] well marked presystolic murmur was present when the patient [illegible] Also remember very well another case seen in the Cambridge M.B. examination in which no murmurs at all were heard when the patient was lying on his back. On sitting him up however it was impossible to miss the presystolic murmur. In both these cases the condition would not have been

[illegible] had they been examined in one posit[illegible] of early mitral stenosis which [illegible] roughening or accentuation of the [illegible] pulmonary sound and reduplication [illegible] second [illegible]

[illegible] chiefly concerned with the [illegible] rheumatic [illegible] it must be realized that [illegible] and it is of interest [illegible] on the significance of clinical [illegible] at Boston [illegible] clinical and post-mortem [illegible] the opinion [illegible] of the mitral valve [illegible]

[illegible]

Besides [illegible]

These [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] that [illegible] noted [illegible] could [illegible]

[illegible] could [illegible] rapid [illegible] In [illegible] rate [illegible] multiple [illegible] method [illegible] for an [illegible] be [illegible] by

[illegible] members [illegible] Canal [illegible] 1,000 [illegible]

Bet[illegible] [illegible] tion [illegible]

In re[illegible] the history [illegible] permanent cardi[illegible] cardium indicat[illegible] endocardium [illegible] cases which sho[illegible] and who have [illegible] to duty. Patients [illegible] without other [illegible] which may becom[illegible] to realize that [illegible] Thus if the patien[illegible] attacks [illegible] therefore [illegible] in [illegible]

Transient [illegible] in his [illegible] If however the [illegible] systolic murmur [illegible] it is strong evidence [illegible] cause scarring of the [illegible] encountered [illegible] the type [illegible] systolic murmurs for the diagnosis [illegible] valve lesion [illegible] following reasoning illustrated by [illegible] cases.

It is generally recognized that in practically any case of rheumatic valvular disease the mitral valve is affected whether the other valves are also involved or not. In every case of aortic incompetence therefore we are justified in assuming that there are vegetations on the mitral valve irrespective of what murmurs are present at the apex.

In the case of J. D. Q. aged 15 Boy, I recall marked diastolic murmur was heard during the left sternal edge indicating aortic incompetence a short low pitched systolic bruit being heard at and internal to the apex beat. There was no reduplication to the left (which is supposed to be evidence of mitral incompetence) although we know that the mitral valve was probably involved because the aortic valve was affected. The important point about this systolic murmur was that it appeared five days after the onset of the acute rheumatism and persisted for eight months. It is this fact alone which indicated that vegetations had formed on the mitral valve early in the course of the illness although aortic incompetence not having developed until a relapse occurred in 4 months after the onset of joint pains.

Cases with Little or Poor Response to Exercise

Before passing patients as fit for duty it is essential to know if their hearts will respond normally to exercise but one must realize that a poor response does not necessarily mean that organic heart disease is present as will later be demonstrated. There are two methods of testing this response in our patients. First by taking a careful history of their symptoms and secondly by putting them on the high step standard exercise test and timing their recovery. The history should be questioned as to whether dyspnœa palpitation fainting or pains in the chest occur on ordinary or strenuous exertion but it should be remembered that certain individuals who are anxious to be invalided will invent or exaggerate such and the examiner on these points. The standard exercise which we employ is as follows. The pulse is taken while the patient is seated and then while standing at rest and gym shoes being worn. Jump up and down on a chair twenty times in a period of [illegible] seconds. The pulse is taken again immediately after exercise and thereafter at [illegible] half minute and three minutes. The amount of [illegible] pain or dyspnœa should be noted the patient being [illegible] if the pulse has returned to its resting [illegible] within fifteen seconds of the exercise. If from our [illegible] we have reason to consider that the response to exercise is not [illegible] these first [illegible] that the patient is [illegible] is described by Sir Thomas Lewis [6] [illegible] that it is [illegible] a final diagnosis but rather [illegible] of [illegible] conditions both organic and

functional. The [illegible] that syndrome may [illegible] heart disease, [illegible] or other chronic [illegible] valescent from acute illnesses, and in those still [illegible] strain or anxiety.

It will be seen therefore that those boys [illegible] adequate period of convalescence from rheumatic [illegible] effort syndrome. Cases in [illegible] the following heads:

(1) Those with obvious signs of cardiac damage [illegible] mitral valvular lesions.

(2) Those with rather [illegible] damage, but with no [illegible] response to exercise.

(3) Those whose hearts are simply out of training [illegible] in bed and who have not been weighed and measured.

(4) Those whose symptoms are caused by [illegible] of their hearts or by any other kind of anxiety.

Amongst our cases we have frequently found [illegible] obvious aortic or mitral disease with no response [illegible] above test, and [illegible] severe test, for example, lifting a 10 lb. [illegible] stretch of the arms above the head [illegible] aged 20 to 35 of sedentary habits will be able [illegible] without stopping, but will be [illegible] On the other hand a patient with [illegible] period of stress, [illegible] found in him. A good example [illegible]

[illegible]

Previous history.—[illegible]

Family history.—[illegible]

Present illness.—[illegible] H.M.S. [illegible] to the [illegible] passing [illegible] periods and [illegible] ness of the [illegible] was a [illegible]

The operation was [illegible] with no [illegible] could [illegible] [illegible]

[illegible]

[illegible]

[illegible]

[illegible] duals [illegible] thing [illegible] of [illegible] the [illegible] [illegible] [illegible]

twitching, loss of weight, anæmia, raised sedimentation rate, and leucocytosis above 10,000 per c.mm.

In conclusion, it should be mentioned that in certain cases of the effort syndrome following rheumatism, already referred to, it is possible that the heart has not been affected by the rheumatism, and is merely out of training after a prolonged period of inactivity in bed. In these cases, who will show no other signs of endocarditis, graduated exercises and drill [9] should be given. The rest is should be carefully supervised, and a watch kept for any [illegible] dyspnœa or commencing tachycardia after the exertion. By this [illegible] cases who would otherwise have been invalided with a poor [illegible] exercise may gradually increase their capacity and tolerance [illegible] by climbing to full duty. Those who do not react favourably and [illegible] of distress during, or after the drill, should be frequently re[illegible] and eventually invalided, if the exercise tolerance does not improve [illegible] after a reasonable period, or if valvular lesions are discovered.

REFERENCES

[illegible]

DISORDERS OF NOCTURNAL SLEEP IN NARCOLEPTICS

By Surgeon Captain MACDONALD CRICHLEY, M.D., F.R.C.P., R.N.V.R.
Consulting Neurologist to the Royal Navy

Narcolepsy is described in textbooks as a syndrome made up of two [illegible] symptoms, first attacks of irresistible sleep, and secondly cataplexy [illegible] sudden collapse (effective hypotonia). It [illegible] the objects of this paper to direct attention to a third clinical manifestation, [illegible] important and scarcely less common, namely disorders [illegible] sleep. These disturbances are of sufficient significance [illegible] their inclusion as a third member of a [illegible] clinical trial.

[illegible] these disorders will naturally lead to a discussion of the [illegible] of narcolepsy, its pathophysiology, and its relationship to any [illegible]

[illegible] Paper read at the Third International Neurological Congress [illegible] 1931.

From time to time incidents have [illegible] phenomena were habitually [illegible] and [illegible] have also been [illegible] and attacks of motor [illegible]. Since the less few [illegible] have been [illegible] of these events or [illegible] them under [illegible]. Most [illegible] L. Wender [illegible] complex [illegible] than usually [illegible] manifestations [illegible] (1) Attacks [illegible] at night [illegible] talking [illegible] of time with [illegible] (4) more lasting spells of [illegible] in the [illegible].

For the purposes of description [illegible] sleep [illegible]

(a) Pred[illegible]

(b) [illegible] without [illegible]

(c) [illegible] the [illegible]

Any [illegible]

(1) The [illegible] M[illegible]

It is well known [illegible]

[illegible]

In the [illegible]

[illegible] being [illegible] in [illegible] feel are of [illegible] narcoleptic subjects [illegible] phenomena before they fall [illegible] keep. Such unrest is common [illegible] stage is often prolonged [illegible] physical unrest—though it may [illegible] usually [illegible] other phenomena such as [illegible] restlessness [illegible] states [illegible] hallucinosis.

(b) Hypnagogic Hallucinations.

[illegible] subject to visual auditory [illegible] often elaborate in nature. My narcoleptic patient [illegible] described this as follows:—

[illegible] half an hour I begin to [illegible] I fall asleep and soon [illegible] that I am visit [illegible] *I actually feel fingers touch* [illegible] the feeling on most real and [illegible] that they are in the room with me [illegible] talking or [illegible] I can hear them up [illegible] and then I actually see [illegible] Then I fall [illegible] of [illegible] but in the [illegible]

[illegible] hypnagogic and hypnopompic hallucinations, it seems highly probable that the former [illegible] the sleep-consciousness is [illegible] hallucinations and hypnopompic and auditory and [illegible] hallucinations). Strictly speaking, the hallucinations [illegible] are not pathognomonic.

(c) Hypnopompic Hallucinations.

[illegible] hypnopompic hallucinations as [illegible] Hypnopompic hallucinations:—

[illegible] half [illegible] this [illegible] things in these half [illegible]

[illegible] rather unusual in that [illegible] at [illegible] symptoms with the [illegible] of interest [illegible] preoccupation [illegible] phenomena.

The patient A.B. previously referred to [illegible]

[illegible]

This patient [illegible] actual sounds [illegible] narcolepsy. On [illegible] hallucinatory [illegible] assumption [illegible] tions of animal [illegible] due to [illegible] is of course [illegible] correspond [illegible] hallucination.

A number [illegible] cases [illegible] Many—perhaps most of the [illegible] coupled with [illegible] is probably [illegible] Serjski and Trinkin spoke of [illegible] after retiring, associated with [illegible] trying to choke him. After [illegible] power the assailants only [illegible]

One of Rosenthal's patients [illegible] to dream peculiarly vivid and [illegible] connected with the theme of [illegible] going after him so that [illegible] out of him. Mayer's patient [illegible] had dreams [illegible] waking hours he is at times hallucinated. Several times [illegible]

formed [illegible] he [illegible] imaginary.

Daniel [illegible] lepsy he [illegible] stage of predormital motor helpl[illegible] like figure would appear and then [illegible] than a snake was biting his [illegible] He might even see and feel [illegible] parrot screech [illegible] By [illegible] if they were [illegible] and almost pleasur[illegible] patient described [illegible] helpl[illegible] forms would appear [illegible] windows [illegible] birds and other [illegible] her mouth. In [illegible] childbirth or of a [illegible] patient imagined [illegible] them. They [illegible]

[illegible] nocturnal [illegible] of terror and [illegible] upon the wall. [illegible] Another patient [illegible] [illegible] He would [illegible] [illegible] [illegible]

[illegible] all the more im[illegible] hallucination [illegible] normal people [illegible] symptoms [illegible] is probable that these [illegible] They [illegible] phenomena [illegible] nature in healthy [illegible] they are dropping [illegible] persons inquir[illegible] experiences of [illegible] the illuminative [illegible] descriptions of [illegible] hallucinations [illegible] Maury [illegible]

[illegible] may take the form of isolated [illegible] sentences [illegible] Visual images when they [illegible] are thoroughly and [illegible] complicated and many [illegible] — objects, landscapes [illegible] may be [illegible] forms in action [illegible] images may disappear when the eyelids are closed and they [illegible] minute as the eyes. Or they may persist when the lids are [illegible] They may be very lamply and directly [illegible] in congruity with [illegible] and [illegible] illusion of reality. Ordinarily they [illegible] be recalled or changed [illegible] by any willed effort. [illegible] seems passive but [illegible]

(c) Sleepiness and Drowsiness on Waking.

Attacks of apparent [illegible] feelings of paralysis are sometimes encountered in association [illegible] in proximity to a period of sleep by both narcoleptics and non-narcoleptics. Thus they may occur while dropping off to sleep [illegible] while in an unusual spell of wakefulness. Most frequently they occur on waking in the morning. In normal subjects this [illegible] feelings of paralysis may be felt in a completely normal and uncomplicated sleep [illegible] a prematurely deep sleep as for example after a period of [illegible] or a fitful uninterrupted sleep. The sleep may be [illegible] may be [illegible] sedatives or hypnotics on [illegible]

Such phenomena [illegible] carefully described in normal persons by Weir Mitchell in 1887 and [illegible] sleep paralysis and hair-pressed [illegible] the former designation in its German equivalent. Wetzel [illegible] The term has the drawback of not applying to the exactly similar [illegible] during the course of the night or in dropping off to sleep. Kinnier Wilson's term "sleep paralysis" is therefore more suitable.

The characteristics of the attacks are [illegible] the subject finds himself [illegible] by a feeling of intense helplessness [illegible] Visual [illegible] particularly [illegible] the spell is in [illegible] and [illegible] rather than loss of power. Sighs [illegible] a feeling of suffocation [illegible] discomfort in the chest [illegible] sleepiness felt when resting [illegible] in spite of [illegible] willingness to speak [illegible] exist. [illegible]

[illegible]

Here [illegible] psychical [illegible] described [illegible] ness seems [illegible] delusional [illegible]

THE NATURE OF NARCOLEPSY

The nature of [illegible] evidence pointing [illegible] ated with disorder [illegible] over their narcolepsy [illegible] disease now growth [illegible] for those cases [illegible] and injuries to the brain [illegible] another very [illegible] weight

To localize the [illegible] explain the [illegible] been two main attempts —

(1) Following Kanner Wilson [illegible] lepsies — is they fitted to call them [illegible] resemblances between the sudden [illegible] occasional occurrence of convulsive and [illegible] narcoleptic sleep [illegible] existence of [illegible] are narcoleptic and others epileptic [illegible] heredity the replacement of epilepsy in [illegible] years (or vice versa) these are [illegible] duced It must be emphasized however [illegible] exceptional and unfortunate [illegible] epileptic and narcoleptic attacks [illegible] relieve epilepsy are ineffectual if not [illegible] must not ignore the misunderstanding clinical fact that [illegible] narcolepsy shows itself as a disease sui generis [illegible] their cut and consistent in its attacks is only [illegible] or surgery Within the last year [illegible] has strikingly supported the view that [illegible] same The electroencephalogram of the [illegible] the features of the epileptics either [illegible] during an attack the record [illegible]

(2) [illegible] is that narcolepsy represents some [illegible] cure but [illegible] of the physiology of sleep. This idea [illegible] is of course strikingly supported by the [illegible] nal sleep is described in this paper. The [illegible] upon is a form of unconscious- [illegible] but rather as an abrupt and short lived [illegible] or disturbance of [illegible] in favour of the sleep hypothesis [illegible] hypothalamic symptoms e.g. obesity [illegible] hypothalamic tumours and with post [illegible] lesions are notorious. (c) the nature [illegible] the lower level or physical signs of sleep [illegible] from the higher level signs (loss of con [illegible] of the normal sleep which is often [illegible] ness vivid dreams and even hallucinations [illegible] analysis which is in his complexity may be [illegible] Localized sleep or dissociation between the [illegible] of sleep. (f) the electroencephalographic [illegible] shown during the narcoleptic attacks [illegible] sleep sleep. (g) the skin resistance tests of [illegible] of the physiological mechanism of sleep [illegible] (h) the fact that benzedrine a drug which [illegible] sleep is so striking a clue in narcolepsy.

[illegible] Naval and Military Services

[illegible] of the German Army surgeons during [illegible] soldiers were diagnosed correctly and [illegible] In 1916 one of Mendel's patients was [illegible] while on listening post. He narrowly [illegible] In 1917 one of Singer's patients was referred to [illegible] fell asleep while on the march and also [illegible] Some of these narcoleptic soldiers actually [illegible] with high explosives.

[illegible] and of the factors predisposing to the [illegible] and mines are often particularly liable [illegible] bring about catastrophic repercussions [illegible] to the frequency with which narco- [illegible] miners and other vehicles. Some authors [illegible] age as an etiological factor in [illegible] of the disease. Proximity to [illegible] mechanically propelled conveyances are

[illegible] of [illegible] recent [illegible] ration [illegible] to his explanation [illegible] of narcoleptic sobriety [illegible] well as in despatch [illegible]

In the same way [illegible] isolation may readily [illegible] tend to sleep while [illegible] succumb when on a [illegible] frequently slept while [illegible] acting as lighter [illegible] by the Captain [illegible] has also slept on the poop [illegible] occasion he slept [illegible] painting the ship [illegible] astride a cannon [illegible] sounded [illegible]

Attendance [illegible] and is [illegible] Naval prisoners kept [illegible] to make him [illegible] the voyage [illegible] he had [illegible] He did not [illegible] himself [illegible] him still sleep [illegible] of all the [illegible]

It seems [illegible] upon the [illegible] chains [illegible] as tend [illegible] and—the [illegible] sunlight [illegible] the approach [illegible] fleeting [illegible] arrangements [illegible] service is slept [illegible] the stupor [illegible] readily [illegible] [illegible] [illegible] or [illegible]

[illegible]

[illegible]

CLINICAL NOTES IN DERMATOLOGY

By Surgeon Lieutenant-Commander E. GWYNNE THOMAS, M.D., M.R.C.P., R.N.V.R.

R.N. Hospital, Plymouth.

This article is not intended to be in any way a textbook of treatment of dermatoses, but a complete description of the methods used in selected types of disease. It consists of a few suggestions that may be found useful in some of the conditions one sees most frequently.

In spite of the fact that in dermatology the lesions are visible and that one is less dependent on the patient's description of the symptoms than is the case in general medicine, the practice of diseases of the skin is regarded by many, with some justification, as being obscure. This is due partly to the great variety of unusual names that have been introduced into the subject, and to the minor role that is played in the study of materia medica by the majority of the medicaments in common use in dermatology. It can be simplified considerably by the application of a few general rules. It will be noticed that the prescriptions suggested later, with one exception, are all of a simple nature; this is an important point and might be called Rule Number One. It is preferable to use a few preparations, and in so doing to acquire a thorough knowledge of the capabilities and deficiencies of each, rather than to use all preparations in the pharmacopœia, and to be master of none. Moreover, the skin tends to heal itself if it is not irritated, and remissions make difficult the estimation of any drug, unless it is used in a large series of cases. This does not indicate a descent to an old level, so aptly described as "Skin diseases can be divided into two classes: those that get well when treated with ung. hyd. ammon. dil., and those that do not, but which are treated with it all the same." The knowledge of the powers of a drug will

[illegible] most pitiful of all. Many [illegible] an [illegible] and take six or seven months to get well [illegible] in these cases that the correct treatment is given [illegible] a miracle if it does not do harm and the condition does [illegible] the treatment is altered a few times and such [illegible] preparations are used so that in the end the condition [illegible] considerably worse than it was in the beginning.

This leads to the second general rule. The majority of [illegible] are inflammatory and an inflamed skin like any other [illegible] rest. This is best achieved by the use of a soothing [illegible] undoubtedly a large group of conditions that need stimulating ointments but if there is any doubt as to the appropriate treatment err on the side of safety. Only too often is it found to be more difficult to treat the dermatitis produced by treatment than it would have been to have dealt with the original lesion. As an adjuncts to this rule it might be mentioned that sulphur ointment which is very effective in scabies is of little value in any other condition and should be avoided.

The third and equally important rule is to adhere to the ordinary surgical principle of allowing any discharge that may be present to escape. In conditions producing serous and purulent discharges should not be treated by ointments in which the first [illegible] an impermeable barrier. Lotions should be exhibited at least until the discharge has ceased and then the ointment can be applied if necessary. In this connection the pastes occupy an intermediate position as they have a degree of absorbent value.

One of the commonest diseases with which [illegible] is impetigo contagiosa and in this condition as a general rule do not apply any kind of ointment. It is an ointment which is in very common use but I consider it most unsuitable for two reasons. In the early stages there is a serous discharge which later becomes purulent and this discharge should not be hindered by an ointment. The second objection is also physical. At the normal skin temperature especially in warm climates the paraffin first melts and secondly it runs. It is then particularly liable to produce fresh lesions in any area touched by the melted ointment. The best preparation in the earliest stages and also in those cases with a marked secondary infection by staphylococci is acriflavine, used either as a lotion of a strength of 1 1000 or if the [illegible] strength in 50 per cent. alcohol. The latter is often more useful in producing a quicker drying effect. Once the second or dry stage has been reached one can use a mercury preparation if one wishes. Of these I often find [illegible] is 3 per cent. of the yellow oxide of mercury in zinc paste. This ointment does not melt at the normal skin temperature and also has a certain degree of

[illegible] The lesions occur most frequently on the face or the shaving [illegible] should be prohibited. As impetigo is of streptococcal origin [illegible] has been used in conjunction with local treatment but [illegible] marked shortening in the duration of the disease.

The [illegible] organism that produces a considerable [illegible] of pustules and furuncles. Again it is [illegible] organism [illegible] do not treat these conditions with [illegible] If [illegible] example a boil is treated in this manner [illegible] become infected so producing a crop of [illegible] The [illegible] of infection can be avoided by using white [illegible] perchloride of mercury of a strength [illegible] The perchloride solution can also be [illegible] used in a concentration stronger than [illegible] produce a chemical folliculitis. The [illegible] children applications. In these [illegible] pustulosis varicis barbae [illegible] is [illegible] antiseptics as the local [illegible] is treated with a chronic dermatitis is [illegible] medicinal medicinal. Some [illegible] these manganese and [illegible] are best [illegible] If however there is no [illegible] thought it is not of any great use to [illegible] given by mouth and [illegible] offer remedies.

[illegible] is [illegible] shock [illegible] the [illegible] types is a marked general [illegible] methods are by [illegible] Both are given in quantities [illegible] The injections are [illegible] the [illegible] minimize the feeling of [illegible] only slight in degree and [illegible] further the [illegible] clean [illegible] specified [illegible] information [illegible] claims.

When [illegible] in the dermis [illegible] It produces a red glaze [illegible] and often

spreads on [illegible] respect of the pinna and [illegible] side of the face. This dermatitis is usually associated with a seborrhœic condition of the scalp. It is extraordinary how rapidly the condition improves when treated with ichthyol. The drug should be painted upon a glycerine [illegible] applied on the acute stage. In the more mild chronic stage zinc paste [illegible] suitable for the forum. [illegible] uses the ichthyol [illegible] about 2 per cent.

Another infection of the skin [illegible] that is particularly certain to treatment and having [illegible] is epidermophytosis. When precedent the [illegible] is usually amenable to treatment with the [illegible] salicylic acids. It is the [illegible] difficult to cure. In the acute [illegible] and that is fuchsin paint. [illegible] In the chronic stages [illegible] salicylic acids either in an ointment [illegible] the application can be made by [illegible] self applied. Before the application [illegible] removed. This is best [illegible] tion of potassium permanganate [illegible] after the feet have been dried. [illegible] dry brush. On [illegible] nails owing to the risk [illegible] nails is [illegible] and the application [illegible] are done [illegible] time to time of these perhaps the best [illegible] its derivative. The latter [illegible] flared in parts applied [illegible] ally in the face either [illegible] vesicular eruption [illegible] as the epidermophytids. [illegible] but only the surface [illegible]

Ichthyol is a [illegible] unfortunately [illegible] known to [illegible] mantis herpes [illegible] considerable [illegible] may be [illegible] when considered [illegible] form it goes with [illegible]

[illegible] plant that may be [illegible] the irritation as for example [illegible] sprinkling antiseptic [illegible] should be avoided owing to the [illegible] their effects on clothing and bedding when used over large [illegible] powders should be applied. The term powders is used to [illegible] which when they dry on the skin leave a precipitate of [illegible] This lotion often is sufficient by itself to [illegible] It should not be said the addition of 1 per cent or 2 per [illegible] acid will usually add considerably to its effectiveness. Itching [illegible] most marked when the temperature of the skin rises and for this [illegible] usual for patients to complain more at night when they are in [illegible] interfere with sleep to such an extent that the health generally suffers. A useful method of relieving this irritation and by so doing enabling the patient to sleep is to give a bran bath made by squeezing a small bag of bran in the bath water or by giving a bath containing about two ounces of liquor picis carbonis. The relief obtained by either of these methods is very marked. Internally the use of luminal helps to produce the same effect. Occasionally the irritation is due to an extensive attack of uticaria and the injection of adrenalin or of whole blood relieves the condition appreciably. Calcium preparations are often given by injection or by mouth but are not of any great value.

The localized types of itching eventually give rise to a condition known as lichenification in which the skin is thickened marine in colour and the normal creases are greatly exaggerated. It is found in varying types of cases, such as the allergic in which there is often a history of asthma and the eruption is limited to the flexures to those with varicose veins and to people of a nervous disposition in whom there is no local cause but have developed a scratch habit. In every type of case the common factor is friction by scratching or rubbing and this in turn leads to further irritation and so a vicious circle is set up. To establish a cure the itching must be controlled as once a certain stage is reached it is impossible to refrain from scratching. When available superficial X ray therapy is extremely good. Of the antipruritics by far the best is crude coal tar of 3 per cent strength in a base of zinc paste. This application is best tied on and covered to improve contact, and also the covering acts as an additional bar to further friction.

It might be justifiable to end with one last general rule one that is sufficiently important to be left to the end to gain extra emphasis. In all conditions in which the skin is acutely inflamed avoid applying water and above all avoid the use of soap.

NIGHT BLINDNESS: A SIMPLE DARK ADAPTATION TEST

By Surgeon [illegible] JOHN A. SHEPHERD, M.B., B.Ch., R.C.P.I., R.N.V.R.,
H.M.S. Holeb

The incidence of night blindness has for long been considered [illegible] among fishing people and in [illegible] of Newfoundland and Labrador. At the present time the condition is [illegible] recognized for humanitarian [illegible] association with religious [illegible] work with [illegible] (Mutch and Griffith 1[illegible]). Such outbreaks [illegible] may represent both dietary [illegible] and [illegible].

In recent years night blindness has been [illegible] with deficiency of vitamin A [illegible]. There is [illegible] that certain groups [illegible] and that these may be improved by the administration of vitamin [illegible] (Thomson *et al.* 1[illegible]; Lamb and Mitchell 1[illegible]). It has also been [illegible] that night blind subjects may have [illegible] vitamin A in the blood as compared with [illegible] (Bauer 1[illegible]; Special Report [illegible] Abbass 1939).

Treatment of night blindness [illegible] by dietary control is [illegible] scope of this paper [illegible] emphasize the importance of minimum testing [illegible] for mass special dark adaptation [illegible] dark adaptation tests for the estimation of [illegible] such tests as an index of deficiency [illegible]. Simple and modest [illegible] available by means of [illegible] can be [illegible] night blindness is [illegible] is of primary importance.

Night blindness may [illegible]. The curable type [illegible] deficiency, and these may be improved by appropriate [illegible] subjects may be night blind possibly [illegible] causing vitamin deficiency (Tansley 1[illegible]). The incurable type is usually congenital and a family history may be [illegible]. Retinal degeneration and other rare conditions also cause night blindness.

In undertaking this study it was not anticipated that any cases of deficient dark adaptation due to a vitamin deficiency would be found [illegible] service diet is adequate. One did not [illegible] individuals might have a distaste for [illegible] A. Whether or not there are many [illegible]

degree [illegible] matter of conjecture and it was hoped that some information on this [illegible] might be obtained.

No attempt is made to throw on the processes involved in dark adaptation of the retina, but circumstantial evidence suggests that visual perceptions at low illuminations are the result of the reaction of the substance visual purple to light. Visual purple is contained in the retinal rods and bleaching occurs at exposure to bright light. Dark adaptation depends on the regeneration of visual purple, and deficient regeneration may be due to disease of the [illegible] or to a deficiency of pigment, most [illegible] to lack of vitamin A in the blood. Vitamin A being chiefly related to visual purple. Such is an accepted theory, but it is likely that an complex nervous mechanism is involved. Many will not [illegible] Vitamin A deficiency is a fact, unless there are other signs such as [illegible].

[illegible] is a physician from [illegible] the psychiatric press, the modern advertiser [illegible] recognition of produce night blind consciousness. [illegible] the psychiatrist [illegible] cases should not allow the [illegible] physical physical [illegible] condition in most cases.

[illegible] has been taken to record the use [illegible] illumination, night and night vision [illegible] experienced psychiatrist [illegible] influence in [illegible] for the [illegible].

[illegible] and the [illegible] Allsky (1939) suggested the [illegible] dark adaptation [illegible] practice [illegible] dark adaptation [illegible] results. Various [illegible] may be [illegible] and [illegible] size [illegible] Allsky 1939. The [illegible] and adjustments must be [illegible].

[illegible] dark adaptation [illegible] family [illegible] night [illegible] but [illegible] emphasized that [illegible] lights of [illegible] nyctalopia may [illegible] the [illegible] in charge [illegible] measurements and in [illegible] (1939) and

[illegible] record [illegible] of the [illegible]

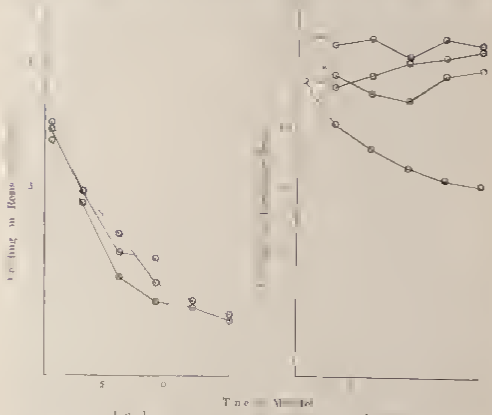
[illegible] dark [illegible] to [illegible] the [illegible] those [illegible] good [illegible] frequently [illegible]

[illegible]

[illegible] centre hole in [illegible] mation inside the [illegible] side compartment [illegible] ance Wire) By adj[illegible] behind the screen the [illegible] mation was sufficient [illegible] spots at a given dist[illegible] a dark room after exp[illegible] seconds of dark adaptation [illegible] lord scale is fitted along [illegible] divisions up to the max[illegible] ence apparatus has a small [illegible] on the scale To ensure [illegible] inserted into the front [illegible] exposure meter [illegible]

[illegible]

[illegible]


Time in Minutes

[illegible]

[illegible]

[illegible]

[illegible] mark [illegible] spots [illegible] and [illegible] is given [illegible] quickly [illegible] same [illegible]

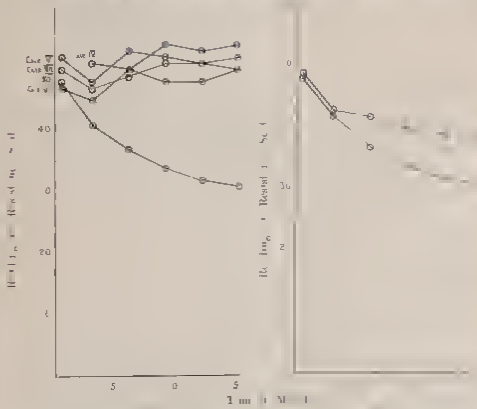


Fig. 3.—Adaptation curves of four lookouts (Case [illegible]) [illegible] curve for [illegible] millilamberts [illegible] [illegible] millilamberts ratings

minutes in the dark [illegible] their reading [illegible] and [illegible] reading [illegible] Not [illegible] for [illegible] middle spot just fails to be seen. The [illegible] spots [illegible] and the [illegible] spots [illegible] utilized. [illegible]

on the part of the subject. Variations can be effected by covering one or other spots with the finger. It is harder to fix the moment when the spot is seen on increasing illumination than the moment when the recognized object disappears on diminishing illumination. In recording the three minute readings there is no objection to switching the scale with the aid of an electric torch provided the subject shuts and covers his eyes for a few seconds.

Fig.

[illegible] Apparatus. The sliding [illegible] is in [illegible] the [illegible] inside compartment of the [illegible] lower [illegible] selection of an [illegible] meter [illegible]

The following groups have been tested, and no persons with defective vision as detected by Snellen's test types is included —

(1) Ratings taken at random from the ship's company.

(2) Lookouts.

(3) Subjects complaining of poor night vision.

To ensure that results were not greatly affected by previous recognition of [illegible] conditions, some individuals were given repeated tests at different [illegible] days. How the [illegible] influences the marked alter results is shown

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] with those obtained by the present method. It is considered, however, that the technique here described has the advantage of recording both the rate and extent of dark adaptation with fair accuracy and is of more practical value. The superiority of an adaptation test during exposure to bright light has already been emphasized.

Summary

(1) A simple instrument for the measurement of the rate of dark adaptation is described.

(2) The theoretical basis of the test is discussed and it is concluded that the method is suitable for a routine to be employed in the recognition of moderate to severe degrees of dysadaptation. The practical value of such a test immediately after a known period of blindfolding is emphasized as opposed to that of methods which are employed after a long preliminary dark adaptation.

(3) Details are given of results obtained by testing a group of twenty-one lookouts, eleven other ratings and two individuals who were already regarded as deficient. Four ratings in the first group were found to be deficient both in rate and degree of dark adaptation. One deficient rating was found in the second group. Arbitrary standards of normality are defined.

(4) Stress is laid on the importance of testing all men who may be employed on lookout or similar night duties. It is believed that with such routine testing inefficient subjects may be given such duties.

Exigencies of war service have not permitted as adequate an examination of the vast literature on the subject as would have been mentally desired, nor has it been possible to benefit from the advice of those more skilled in the elucidation of ophthalmological problems. It is hoped that any defects may be pardoned on these grounds. The urgency of the question of night vision has been brought home to the writer in the recent winter months.

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Appendix

Table I

Rank or rating	Preliminary reading	Minutes						Rate number
		1	2	3	4	5	6	
A/B	N.T.	19	46	45	49	N.T.	N.T.	1
W.T.	N.T.	54	55	55	55	N.T.	N.T.	2
Midsh.	N.T.	4	4	N.T.	5	N.T.	N.T.	1
A/B	N.T.	N.T.	N.T.	N.T.	N.T.	N.T.	N.T.	4
A/B	5	48	51	52	51	52	N.T.	5
A/B	4	45	—	48	18	5	N.T.	5
A/B	—	4	11	N.T.	N.T.	5	N.T.	

[illegible] Miscellany

Ra[illegible]	[illegible]	Manners				
[illegible]	[illegible]	3			2	1
[illegible]	[illegible]	50	3	13	12	11
[illegible]	[illegible]	41	19	16	15	15
[illegible]	[illegible]	43	42	41	42	11
[illegible]	[illegible]	42	47	44	44	43
[illegible]	[illegible]	11	39	39	35	34
[illegible]	[illegible]	18	43	44	43	43
[illegible]	[illegible]	45	46	43	40	41
[illegible]	[illegible]	11	[illegible]	34	33	39
[illegible]	[illegible]	41	38	37	35	35
[illegible]	[illegible]	4	31	13	9	[illegible]
[illegible]	[illegible]	11	37	31	32	31

[illegible] III. [illegible] Series

[illegible]	[illegible]	Manners				
[illegible]	[illegible]			3	1[illegible]	1
[illegible]	[illegible]	4	11	41	43	13
[illegible]	[illegible]	1	13	43	41	42
[illegible]	[illegible]	1	41	36	28	—
[illegible]	[illegible]	—	11	4[illegible]	44	12
[illegible]	[illegible]	1	1	17	40	38
[illegible]	[illegible]	[illegible]	11	38	31	31
[illegible]	[illegible]	11	39	37	36	3
[illegible]	[illegible]	1	1	44	47	46
[illegible]	[illegible]	1	11	45	42	11
[illegible]	[illegible]	1	41	43	43	43
[illegible]	[illegible]	11	1	44	42	—
[illegible]	[illegible]	1	11	43	—	44
[illegible]	[illegible]	1	5	41	43	44
[illegible]	[illegible]	1	11	42	41	42
[illegible]	[illegible]	1	11	21	17	13
[illegible]	[illegible]	[illegible]	[illegible]	45	44	46
[illegible]	[illegible]	[illegible]	[illegible]	38	38	37
[illegible]	[illegible]	[illegible]	[illegible]	12	11	39

SOME OBSERVATIONS ON THE POTENTIALITIES OF AIR CONDITIONING FOR H.M. SHIPS ON TROPICAL SERVICE

By Surgeon Lieutenant-Commander W. J. Forbes Guild, M.D., R.N.

[illegible] this topic at the present time may seem at first irrelevant [illegible] towards the betterment of living conditions in what are [illegible] living ships tend to be postponed inevitably in times of active [illegible]. It can be shown, however, that such measures would play a part [illegible] in all fighting efficiency. The question of relevance is not in [illegible]. The very material influence which climatic conditions can exert on [illegible] ashore or afloat, has been recognized [illegible]. The recent and up-to-date confirmatory evidence is [illegible] by the reports available so far on the winter [illegible] of 1939–1940 in the Russo-Finnish War. The inadequacy of the Russian [illegible] and the consequent sufferings of their troops from the excessive cold [illegible] generally accepted to have contributed in large part to their [illegible] and general failures over a period of months.

[illegible]

[illegible]

[illegible]

tion is [illegible] in mosquitoes. Rep[illegible] may still be [illegible] other sources.

While [illegible] vessel (completed in 1[illegible]) [illegible] of 1899 [illegible] opportunity of experi[illegible] the hem[illegible] [illegible] officials [illegible] the ship is afforded [illegible] of [illegible] units for [illegible] during the hot season. [illegible] employed in the sick bay and [illegible] in the Captain's Day Cabin. [illegible] other hours [illegible] the units from which springs the [illegible]

[illegible] Air Conditioning.

[illegible] physical properties [illegible]

[illegible] Navy Hygiene [illegible] An efficient [illegible] physical condition of [illegible] the minimum of comfort [illegible] (ii) an [illegible] which has resulted [illegible]

[illegible] Air Movement [illegible] Both of them are at [illegible] multiplicity of fans [illegible] Modern air [illegible] Temperature [illegible]

[illegible] of these five [illegible] to point out that [illegible] the name Air Cooling is [illegible] through [illegible] the following sen[illegible] which will provide [illegible] fresh [illegible] But in from a [illegible] simply circulated through [illegible] refrigerating capacity [illegible] should be employed [illegible]

[illegible] whereby this is produced [illegible] mechanical refrigeration and the [illegible] there is the condensing [illegible] refrigerant [illegible] chloride or the

compound known as [illegible] is reduced by [illegible] in which form it is passed to the [illegible]. On entering the [illegible] through an expansion valve which releases it from the [illegible] gaseous form. This change of state is accomplished by the [illegible] of heat from the cooling coil which [illegible] temperature of some 30° to 50°. The [illegible] gaseous Freon to the compressor [illegible].

At best the above description [illegible] are outwith the scope of the report [illegible]. It may serve to lay emphasis [illegible]

with an efficient [illegible] during the maximum [illegible] which the [illegible] comprise the Condenser [illegible] machines [illegible] installed in the [illegible] in the Sick Bay. [illegible] staff in a days work [illegible] through the [illegible].

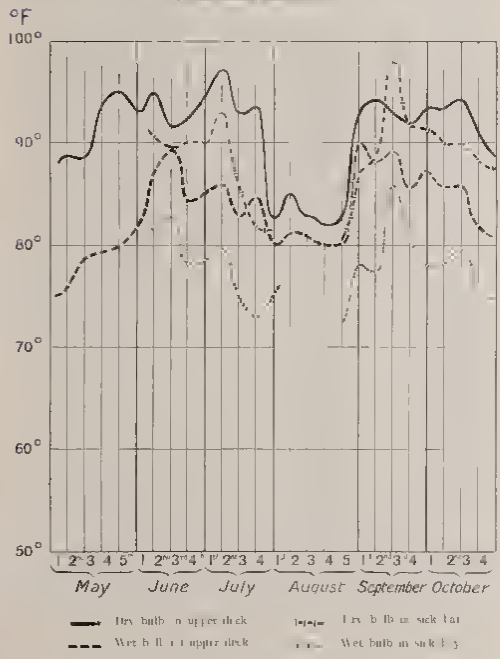
The work [illegible] cooling only which [illegible] machine and the [illegible] conducting [illegible] thing but the [illegible]

[illegible] Lock. The [illegible] with annexe [illegible]

[illegible] must be [illegible]

Chart IX.

[illegible]



[illegible] equipment will effect in twenty four hours [illegible] equivalent to that provided by the machine [illegible] hours. The unit in question was of [illegible] capacity [illegible] modified considerably by the conditions under which [illegible] were markedly different from those for which it was designed. For example the only water available for connection to the [illegible] housing unit was from the fire main system, and in the [illegible] water was often about 90° F. the impairment of the [illegible] in a compressor designed for water circulating [illegible]

The [illegible] is the only been mentioned and the primary [illegible] with the rigid control of [illegible] wild heat [illegible] the points which would require special [illegible] air conditioning afloat. Points and [illegible] throughout the twenty four hours [illegible] to positions fitted with suitable [illegible]

Humidity Control. Humidity [illegible] is effected by passing air of a [illegible] temperature low enough to remove [illegible] must be below the Dew Point [illegible] which condensation commences [illegible] air depends on the temperature [illegible] requires to be kept below 50° to [illegible] The dehumidifying function of [illegible] condensation of moisture from [illegible] collected in a drip-pan and removed [illegible] the efflux of the drain is evidence [illegible]

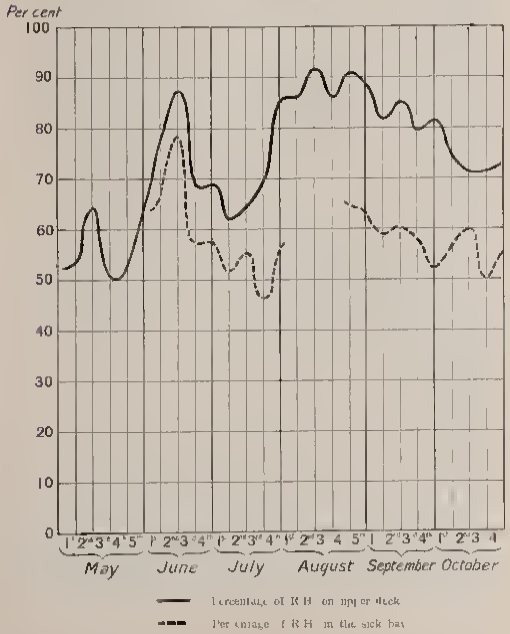
[illegible] of at least equal importance [illegible] lubricating. In this present small scale [illegible] place for the machines performance [illegible] more successful than in its unequal [illegible] method of cooling the [illegible] generally heard upon when the surround [illegible] Personal experience of this will come [illegible] the period of these [illegible] point nearly days with shorts and [illegible] with perspiration. [illegible] minutes in the cooled sick bay [illegible] If complete [illegible] and really proved in itself that [illegible] with lessened

The [illegible] temperature hour-by-hours given in Appendix III is evidence [illegible] (the gas equipment a refit period). The humidity

used as it could has been worked out from the official deck temperatures wet and dry bulb of the ship's log. This review was not contemplated until later and some of the figures (such as humidity reaching 90 degrees) may occasion wholesome scepticism. In passing it may be observed that diffi

APPENDIX III

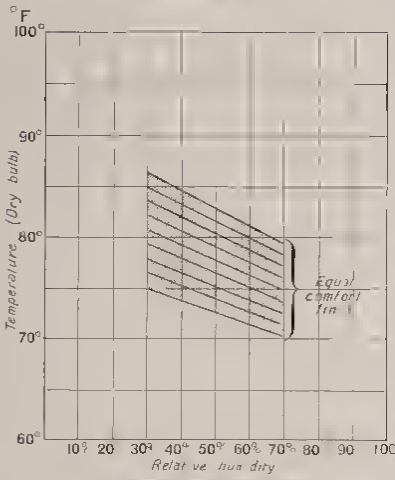
Average weekly relative humidity



[illegible]

[illegible] and [illegible] the maximum [illegible]

(b) [illegible] that the [illegible]



[illegible]

from the time-honoured use of carry in public mind [illegible] tropics is so called that it calls for special emphasis. Yet it will be [illegible] appreciated just how essential it is that this point be [illegible] like effective temperature [illegible] sounds like heresy, yet such a rule would have to be [illegible] tenets of the new order.

The [illegible] and [illegible] ventilation control, which would be required in the [illegible] living-spaces aboard H.M. Ships presents a [illegible] problem. At present the mess-decks are designed to allow 200 cu. ft. per head, though in passing it must be mentioned that the [illegible] of these vessels and the increases of complement entailed lately have resulted in a degree of overcrowding. The following table has been compiled from the writer's ship but it should be remembered that the [illegible] dentum has been offset so far by the numbers who regularly [illegible] ashore.

[illegible] and remembering that the entire space per head [illegible] is available ashore, this means an increase in [illegible] per hour. Different changes per hour where the space per [illegible] 200 cu. ft. is the minimum allowable under the existing designs of [illegible] and the purposes of emergency, it is clear from these figures [illegible] contributing, clearly, that many recent models be absent from new [illegible].

[illegible] total space in the mess-decks would be the 17,900 cu. ft. [illegible] the 1,900 cu. ft. represented by the sick bay and lavatories.

[illegible] living-space	Total number of occupants	Total available air space in cubic feet	Air-space per head
[illegible] mess-deck	47	4,900	158
[illegible]	41	7,900	172
[illegible]	4	5,100	164
[illegible]	108	17,900	166

[illegible] approximately the round figure of 120,000 cu. ft. To effect the [illegible] per hour, unless the controlled introduction of [illegible] *from the outside*. This is well beyond the [illegible] any plant which might be contemplated for [illegible].

[illegible] the proposed employment of refrigerant-cooling plant work [illegible] conditions, bearing, the old ship calls for the [illegible] engineer's skill and [illegible]. In hazard [illegible] the [illegible] simple. Further discussion. A 10 ton system [illegible] equipment [illegible] capable of a [illegible] 7,000 cu. ft. per hour. Then there the refrigerant [illegible] collecting, and maintaining, [illegible] *all of that 200,000 cu. ft. is drawn from* [illegible]. This includes accepting a policy of dilution [illegible] equipment with it. By this means [illegible] employed in cooling a mixture of air

taken both from the compartments and from the [illegible] in variable as required. Probably only one fourth might be [illegible] and so a speculative figure of 50,000 cu. ft. per man and [illegible] per day is arrived at.

Herein lies the crux of the whole question and which [illegible] the crowded living spaces of H.M. Ships is a fresh [illegible] proposition. Its introduction may entail the abandonment by the authorities concerned of views on ventilation which have taken several decades to reach their present-day general acceptance and whose value has been proved over and over again. It is a very different matter from the air conditioning of hospitals, offices and residences where in expensive charge conditions for these are universally characterized by a fixed value per head, and replacement by air from the outside becomes of least importance. Yet the problem need not be abandoned as insoluble. For one thing the insistence on an intelligent routine whereby things would be encouraged to use the upper deck for a proportion of their rest and sleeping times in spite of the inviting coolness below would at least help. For the long run it may be necessary to build an experimental installation and to carry out a series of observations on the question of variation before a definite policy can be taken. The purpose of this submission is merely to draw attention to the very great benefits which can accrue from an enlightening in the proposal and to delineate briefly the difficulties of introducing it afloat.

Shaw's "Naval Hygiene" and the Admiralty Weather Manual have been consulted freely.

I wish to acknowledge my indebtedness to L. S. B. A. Blaker for his valuable co-operation in the collection of data.

NOTES ON THE IMMEDIATE TREATMENT OF WOUNDS OF THE FACE PREPARATORY TO PLASTIC REPAIR

By Acting Surgeon Lieutenant-Commander E. R. GARRATT PASSE, F.R.C.S., R.N.V.R.
R.N. Hospital, Plymouth.

Wounds of the face and neck requiring careful immediate attention if the cosmetic result is to be satisfactory. It is important that certain principles of repair should be understood and that incisions capable of being done in initial dressing stations or sick bay should be carried out in order to facilitate the plastic repair of the wounds. In the cases under consideration reparative plastic surgery has usually to do with replacement of tissue which has been lost by trauma or infection.

(5) [illegible].—In cases where the [illegible] it is a good plan to [illegible] the edges of the eyelids [illegible] talk to [illegible]. This can be done [illegible].

(6) [illegible]. When the facial bones [illegible] jaw are injured, all fragments of bone, however [illegible] should be [illegible] and gently moulded into place [illegible] by means of a [illegible] splint. Plaster of Paris [illegible] may be employed for this.

Fractures [illegible] the bridge of the nose and [illegible] cheeks. [illegible] of the fragments [illegible] bone or loose dirt before reducing the fracture. [illegible] elevating the fragments [illegible] curved Spencer Wells [illegible] into position with the thumb externally. [illegible]. Do not remove any fragments [illegible] slightest amount of periosteum.

(7) *Dressings.* These should be [illegible] as well not to change the dressings too frequently. [illegible] is [illegible] with [illegible] which can be [illegible].

(8) *Burns.* In the [illegible] after the [illegible] exposing the [illegible] sufficient [illegible] be sprayed with a 2 per cent [illegible] until a coagulum has formed. [illegible] and shock [illegible] been applied it must be removed [illegible] and applied. [illegible] loosens [illegible] removed, and the remaining [illegible] superficial skin grafts.

The above applies equally to [illegible].

◆

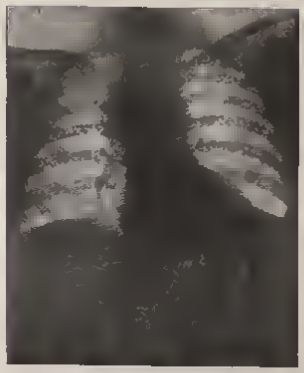
Clinical Notes

[illegible] LIEUTENANT GROWER DE THE [illegible] CONSECUTIVELY RAPID CLINICAL COURSE

[illegible] TO MAJOR C. OMMANEY DAVIS [illegible]
[illegible]

[illegible]

[illegible]



[illegible]

[illegible]

Figure [illegible] [illegible] [illegible]

[illegible]

[illegible]

[illegible]

[illegible] THESIS IN NEUROLOGY AND PSYCHIATRY

[illegible] FR W P MACLENNAN M M [illegible] M R C P [illegible]
[illegible] Hospital Rangoon

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

SUMMARY

[illegible]

A CASE OF [illegible] MALIGNANT COMMUNICATING HYDROCEPHALUS WITH MALIGNANT [illegible] COMPARATIVE [illegible]

[illegible]

Case Report

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

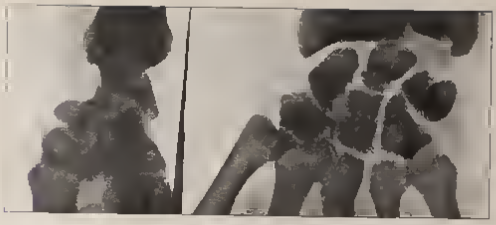
[illegible] 1. After Böhler.—A. The normal arrangement of the blood vessels [illegible] fracture between the vessels. B. The effect of fracture cutting [illegible] off from its blood supply. C. The effect of fracture [illegible] the bone. [illegible]

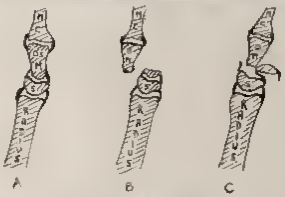
[illegible]

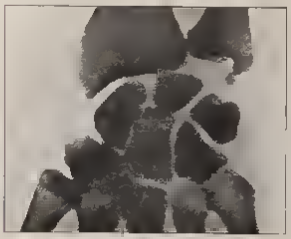
[illegible]

[illegible]

[illegible]




A
B
C



[illegible] who presented [illegible] meta [illegible] [illegible] [illegible]

[illegible]

(3) [illegible] arm [illegible] The [illegible]

[illegible] scribed in [illegible] Hort n [illegible] 22 mass [illegible] ng and some [illegible] bed by Dicks [illegible] most det al [illegible] ed Il wic [illegible] call They [illegible] they term [illegible] n intrado [illegible] they are [illegible] As [illegible] than [illegible] Most [illegible] Wind [illegible]

THESIS WITH FALLACIOUS LOGIC ABERCRAMBIE

By George [illegible] M.D. [illegible]

[illegible]

[illegible] DARK ADAPTED VISION

By Sir [illegible] Commander DUDLEY GURD [illegible]
[illegible] Royal Navy

In these days [illegible] often either feeble or absent [illegible] not be [illegible] factors upon which [illegible] poorly illuminated [illegible] depends.

[illegible] visual mechanism [illegible] which [illegible] and the point of fixation [illegible] the prime [illegible] colours are best [illegible] 590 $\mu\mu$ [illegible]

[illegible] darkened room from a brightly lit [illegible] discernible. After fifteen [illegible] the spectrum is now green of [illegible] stars [illegible] The peripheral [illegible] and the macula [illegible] of the scotopic [illegible]

[illegible] able to see [illegible] pupils dilated [illegible] Provided the [illegible] heard [illegible] as they [illegible]

[illegible] instances [illegible] may be [illegible] is [illegible] the extract [illegible]

[illegible] and [illegible] to persons [illegible] sunshine [illegible] also [illegible] for is [illegible] necessary [illegible] the limit.

[illegible] vary greatly. [illegible] are very efficient in the dark [illegible] because their pupils dilate [illegible]

[illegible] for much the [illegible] be [illegible] quarter of an [illegible] should be completely [illegible] after minutes only [illegible] the [illegible] is been extinguished.

[illegible] OF BRANCHIAL CYST

[illegible] BARRY [illegible]

[illegible]

[illegible] was admitted with [illegible] present four [illegible]

[illegible]

[illegible] diagnosis [illegible]

[illegible]

THE SEED AND THE HARVEST

[illegible] Navy

[illegible] M. [illegible] MILLER [illegible]

[illegible] March [illegible]

[illegible] found [illegible] tuberculous [illegible] cases [illegible]

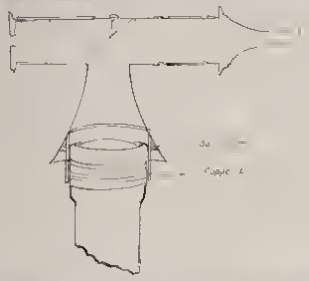
[illegible] divided [illegible]

[illegible] 88 per cent [illegible]

[illegible]

[illegible] the modified instrument [illegible] in [illegible]

[illegible] the instrument into a self-[illegible] [illegible]lly [illegible] In order to obtain the best illumination [illegible] should [illegible] collar so that it occupies the [illegible] would [illegible] the instrument.



[illegible] of the modified instrument [illegible] is obtained [illegible] that the [illegible] [illegible]

Correspondence.

THICK FILM STAINING FOR MALARIA.

[illegible]

[illegible]

[illegible] Yours [illegible]

[illegible]

[illegible] ANALECTA

[illegible] OF THE [illegible]

[illegible]

Reviews.

Report [illegible] Vol VIII 1939 [illegible] Pp 248 Price [illegible] Adlard [illegible]

The eighth [illegible] of the Brompton Hospital Reports [illegible] merely one paper [illegible] published from the hospital [illegible] which [illegible] of [illegible] list [illegible] also to the general [illegible] In studying the volume the latter [illegible] what vast strides [illegible] made in the treatment of lung conditions [illegible] regarded as [illegible] hopeless [illegible] hopeful [illegible] patients The fact [illegible] most forcibly [illegible] the large number of articles in this volume [illegible] surgeons [illegible] the Bureau Lecture of Mr [illegible] 1939 [illegible] this [illegible] assessed the Modern [illegible] of [illegible] Bronchiectasis [illegible] obstructions being based on 1 [illegible] [illegible] The concluded his address with [illegible] [illegible] this [illegible] is [illegible] now assumed [illegible] mortality that should be negligible if the disease is treated in its [illegible] stage [illegible] which has a high proportion of curative results

Another article by the same author appears [illegible] Tumours of the Lung in which the diagnosis [illegible] treatment of these conditions is fully discussed with [illegible] of [illegible] Mr J E H Roberts writes on [illegible] Surgery in the [illegible] Pulmonary Tuberculosis [illegible] Mr [illegible] Surgery

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] Worm Chum [illegible]

[illegible] appreciated

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] 1940 [illegible]
Price [illegible] 6/-

This book on [illegible] ted as the standard work of its [illegible] ly based throughout on the [illegible] tisfactory to find full [illegible] h books of this type [illegible] could not be [illegible] though short and [illegible] There is frequent [illegible] with [illegible] made therapy [illegible] all respects including [illegible] good monograph

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

1672

[illegible]

News of the Service.

ADMIRALTY ORDERS.

Sub.-Lieut. Medical Officers R.N.V.R. (Permanent and Temporary) Transferred to Lieut. Lieut. R.N.

(C.W. 7619/D.—14.3.1918.)

[illegible]

866.—Inspecting Officer of First Aid Organization

(M.H.G. C.E. 1731/40.—14.1.1941.)

[illegible] H.M.S. has been appointed as Inspecting Officer of First Aid Organization [illegible] for advice on first aid [illegible]

[illegible] Commander-in-Chief, Home Fleet, [illegible] Station, and will take [illegible] arrangements.

[illegible] Medical Director-General of the Navy [illegible]

London [illegible]

890.—Anti-Fouling Compartment: Improvised Boiling Tank for Decontamination—Checking of Ships

(M.H.G. B.5213/33.—14.3.1941.)

[illegible] has requested [illegible] boiling tank [illegible] Medical Officer [illegible] ships staff [illegible] Board [illegible] should [illegible] arrangements [illegible] measure of [illegible] before [illegible] ships [illegible] Medical Officer [illegible] rules of [illegible]

[illegible] Medical Officer [illegible] Weight [illegible]

918.—Form M.179: Medical Officer's Journal—Compilation

(M.H.G. 7998/40.—14.3.1940.)

[illegible] notes a [illegible] of the instructions issued with the Medical Officer's [illegible] for the guidance of Medical Officers of ships and establishments.

[illegible] ships receive [illegible] Medical Officer. The name of the ship [illegible] the Alphabetical Sick List (M.1164).

This procedure also applies in cases removed from other ships or establishments [illegible] already on the sick list.

[illegible] ship or establishment without the case has been discharged is always [illegible] in the appropriate column of the Alphabetical Sick List.

3. Separate Alphabetical Sick Lists are to be rendered in the Journal for the following groups:

(a) R.N., R.M., R.N.V.R., R.N.R., R.I.R.

(b) R.A.N. Personnel serving under [illegible] governments [illegible]

(c) W.R.N.S. (title A.D.H. 601/40).

(d) Dominion Navies.

(e) Dominions Navy.

[illegible] (b) and (c) [illegible] (d) and (e) [illegible]

4. During the period hostilities of a vessel is transferred from one Station or Fleet to another [illegible] Sick Lists [illegible] NOT be included in such Sick List or Lists. The first-mentioned [illegible] of Table 1 [illegible] annual.

91[illegible]. Night Lookouts: Selection: Adaptometer for Classifying Night Vision

(F.S.D. 40/40.—31.3.1941.)

[illegible] details concerning [illegible] apparatus known as the [illegible] is promulgated for information.

The Adaptometer can be [illegible] assistance in the selection of night lookouts [illegible] by ships staffs.

[illegible] apparatus consists essentially of a box containing a light of variable intensity [illegible] shape mounted [illegible]

4. [illegible] with light of the brighter intensities but in the light [illegible] men and more difficult eventually nothing can be distinguished.

[illegible] the lowest light intensity with which a man can distinguish

[illegible]

B7.—Destin—REPORTS.

[illegible]

957.—Blood Transfusion—Nomenclature of Blood Groups—Notation on Medical History Sheets

(N.M.H.G. 6144/40—21.3.1940.)

[illegible] to A.F.O. 15/1/15 [illegible]

[illegible]

(A) Intermediate or III (Moss)
(B) Intermediate or II (Moss)
(C) Intermediate or IV (Moss)
(D) Intermediate or IV (Moss)

963.—Treatment by Civilian Dental Surgeons—(at Home)

(M.D.1. 6/1/1940.)

[illegible]

1011.—Medical Stores—Local Purchase

(M.H.G. 4113/40—1.1.1940.)

[illegible]

1020.—Form M.19b—Revised

(Stat. 21/3/40—1.4.1940.)

[illegible]

1206.—Naval Ratings Sick on Shore—Southend District

(N.M.H.G. 8866/40—11.11.1940.)

[illegible] Southend.

1208.—Casualties—R.A.F. Personnel with Naval Units—Procedure—Next-of-Kin—Changes of—REPORTS

(N. 1848/40—11.4.1940.)

[illegible]

[illegible]

1217 A.V.A.D. Members [illegible]

(C.L. 409 [illegible])

[illegible]

1280 Medical Personnel—Amendments in Schedule of Complement

Escort Vessels

(P.M. 187 [illegible] 18 [illegible])

[illegible]

1300 Queen Alexandra's Royal Naval Nursing Service Benevolent Fund

(C.F. 177 [illegible] 18 [illegible])

A fund has been formed for the provision [illegible] to sick sailors and [illegible] deceased women nurses. The subscription is 1/- each for two shillings and the [illegible] quarterly.

Members of the Active List of Queen Alexandra's Royal Nursing Service [illegible] have been allowed to join a voluntary monthly and quarterly subscription [illegible] from their salaries. The Fund [illegible] who have subscribed to it while on the Active List may round up the amount by effective [illegible] signed on payment [illegible] subscription being [illegible].

The management of the Fund is vested in a President and shall be [illegible] two other Trustees, thus [illegible] elected annually in the [illegible] subscribers to the Fund and the Honorary Secretary and Treasurer. Any [illegible] of this shall be [illegible].

The present holders of the [illegible] are the Director General [illegible] the President [illegible] the Director General and Medical-in-Chief Q.A.R.N.S.S. will be [illegible].

[illegible] will be raised [illegible] also in the Canadian [illegible] applicants—[illegible] Medical Officer [illegible] will be posted [illegible] meeting in [illegible] assured that short [illegible] further information [illegible]

1560 Royal Canadian Air Force in Great Britain—Medical Statistical Returns

(M.D.G. 9717/40—18.4.1940.)

[illegible] Royal Canadian Air Force Headquarters has been asked [illegible] in junction with the Royal Canadian Air Force Overseas Medical Officer. The [illegible] Medical Officer in charge of medical arrangements for this Force [illegible] Royal Canadian Air Force medical department and other medical personnel [illegible] that advantageously in regard to work referred to the Royal Air Force [illegible] scheme, pending the Royal Air Force Medical Branch being established [illegible] Royal Air Force Medical Establishment [illegible] Medical Establishment be together with any medical branch personnel [illegible] Medical Board particular [illegible] time to time.

[illegible] Medical Officer
Royal Canadian Air Force in Great Britain
Suite Lobby of Canada Building,
Cockspur Street
London, S.W.1.

Members of Friendly Societies Serving in the Royal Navy—Medical Certificates of Incapacity

(M.D.G. 11116/41—22.4.1940.)

[illegible] unqualified medical officers by Naval personnel [illegible] provided by Friendly Societies.

1579—Medical History Sheets—Sickness

Ships Building and Future New Construction

(N.S. [illegible] 1940.)

It is to be made the practice to fit a filing cabinet for the arrangement of Medical [illegible] all ships in dockyards fitted with a sick bay, where the Medical [illegible] and other [illegible] been made and in similar ships of future new [illegible] the cabinet is to be supplied by Shipbuilders.

[illegible] The "Bunco" drawer type each drawer being fitted with a [illegible] filing [illegible] 14 in. × 9 in. [illegible] number of drawers is to be [illegible] Medical History Sheets carried.

[illegible] is to be fitted in the Surgeon's Dispensary [illegible] each [illegible] available therein for the sick bay in the Sick Bay [illegible] destroyers. [illegible] 3510/39 is to apply [illegible] filing [illegible] board therein.

[illegible] will be issued.

[illegible] B.R. 143/40. The Treatment of Surgical Casualties after a Naval Action—Revised Edition.

(N.S. [illegible] 40—[illegible] 1940.)

[illegible] reference to A.D.D. 91/40, the revised edition of the pamphlet entitled "The [illegible] of Surgical Casualties after a Naval Action" will shortly be available for [illegible] B.R. 143/40.

This revised edition will not be supplied from the H.M. Stationery Depot, Royal Victoria Yard, Deptford, S.E.8, as was B.R. 143/40, but will be stocked and distributed by Medical Officers by the Medical Director-General of the Navy.

1767.—Temporary Commissions, Rank, Promotion in Wardroom Officers.

(Admiralty Fleet Order 1940.)

[illegible]

1785.—Injuries in Terms of Art. 124, Ac.—Personnel.—REPORT.

(Admiralty Fleet Order 1840, 21 July 1940.)

It has been decided that Rule Certificates under Article 1134 of the Naval Article of Monthly (personnel serving under Government) Act 1866 and Article 1134 (Special rules) shall be issued in future in accordance with the following rules for consideration by the personnel on the respective Establishment and shall be sustained while on Naval service.

2. In order that a full injury list may be prepared in the Admiralty, a report should be rendered in the following form by each person concerned in the occurrence in the following form.

REPORT OF INJURY.

Section I.—To be completed by Commanding Officer.

(1) Name in full of person injured.
(2) Rank or rating and official number.
(3) Date, time and place of accident.
(4) Full description of the circumstances of the accident, including the nature of the work, the place, the time, the [illegible]

(5) State exactly how the person was employed at the time the injury was received.

(6) Whether the accident was due to an external cause, or the injured person was [illegible] or intoxicated.

(Signed)

Date. Commanding Officer.
H.M.S.

Section II.—To be completed by Medical Officer.

(7) Full description of the nature, site and extent of the injury and of any [illegible] observed and implied.

(8) Whether the injured person was in a state of health that rendered him [illegible] physical disability or abnormality before the injury.

(9) Whether the injury prevented the person from work, totally or partially.

[illegible]

1790 [illegible] Mosquito Bites

[illegible]

1791 Contract Relative to Medical Care for Merchant Seamen in Hospital

[illegible]

1864 Form M 201—Abolition

[illegible]

1911 Dental Treatment of Mercantile Marine Personnel Engaged on T 124 and F 124 Agreements

[illegible]

[illegible] Nurses [illegible]

[illegible]

[illegible]

[illegible] Appliance Work for Officers Serving Afloat

(MDG 1602, 40 [illegible])

[illegible]

111.—*Trachoma*—Danger of Spread of Infection

(MDG 1401 [illegible] 6.3.1950)

[illegible] part of the [illegible] cases of trachoma [illegible] [illegible] and [illegible] [illegible] officers [illegible] [illegible] and [illegible] [illegible]

2075.—*Blankets*—Increased Allowance for Sick Bays

Tenders and Dockyards

([illegible] 4434 [illegible] 6.6.1950)

[illegible] allowance [illegible] blankets [illegible] increased [illegible] number [illegible] the blankets [illegible] under the stated [illegible] [illegible] BR [illegible] Article [illegible] paragraph [illegible] necessary to [illegible] allowance [illegible] first [illegible]

2081.—BR 435.—Medical Manual of Chemical Warfare and Addendum—Issue of Copies to Medical Officers

(MDG 1636[illegible] 40.—6.6.1950)

A copy of the Medical Manual of Chemical Warfare, 1935, is to be issued [illegible] Medical Officers. The [illegible] BR 435 has been [illegible] the book. A Medical [illegible] Addendum to BR 435 has been issued. To some [illegible] has been possessed of this Manual [illegible] with the Manual. The number BR [illegible] given in the [illegible]

[illegible] Naval Stores [illegible] Medical Aspects of Chemical Warfare [illegible] requires [illegible] BR [illegible]

2095.—*Medical Attendance on Dependants*—Revised Scale of Payment for Civil Medical Practitioners

(CL 1890, 40, 4.1.1949)

The [illegible] Regulations and Administrative Instructions [illegible] 1440 [illegible] have been [illegible] as follows:

(1) [illegible] surgeon [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

DIPLOMAS

[illegible]

GILBERT BLANE GOLD MEDAL

[illegible]

OBITUARIES

[illegible]

SURGEON REAR ADMIRAL EDWARD SUTTIS, C.M.G. (Retd.) died [illegible] St. Margaret's at Cliff, Kent. He was [illegible] Hospital [illegible] Conjoint qualifications and passed the Naval Medical School in 1893. He was [illegible] expected [illegible] *Bonaventure* during the Dardanelles Expedition. In Malta and Salonika he was [illegible] was promoted to Staff Surgeon [illegible] Medical Officer of the Personal Staff [illegible] Medal and Clasp. He [illegible] and *Pleasure*, both [illegible] Medical Inspection [illegible] Hamilton [illegible] 1926 [illegible] and 1931 he was appointed [illegible] Medical Officer [illegible] retired from the Service [illegible] Medal. [illegible] Medal [illegible] for his services in the Yangtze [illegible] Medal [illegible] Medal with [illegible] Medal and St. George [illegible]

Surgeon Rear Admiral Suttis [illegible] health [illegible] was well [illegible] was fond of fishing [illegible] Tom in all who knew him [illegible] and during his retirement [illegible] and his wife [illegible] operation.

SURGEON LIEUTENANT JOHN WALTER BRIDGE, R.N., [illegible] found to be [illegible] the Conjoint qualification [illegible] Ishmail in 1938 and Hong Kong [illegible] personnel to have been [illegible]

SURGEON LIEUTENANT COMMANDER GEORGE ARTHUR LAWSON, R.N., [illegible] in 1934 and [illegible] Lieutenant Commander in 1938. He was [illegible] a good field of fire [illegible] to 1939 he served in H.M.S. [illegible] Medal. He died [illegible] 1940.

[illegible]

RETIREMENTS ETC

[illegible]

PROMOTIONS

[illegible]

ENTRIES

[illegible]

WARDMASTERS

[illegible]

ROYAL NAVAL VOLUNTEER RESERVE

RETIREMENTS AND RESIGNATIONS

[illegible]

ENTRIES

[illegible]

L R C P [illegible] M B [illegible]
Probationary [illegible]
Mr [illegible] M B [illegible]
London [illegible]
Mr [illegible] M R C S [illegible]
[illegible]
Mr [illegible] M B [illegible] M R C S [illegible]
Surgeon Lieutenant [illegible]
Mr [illegible] M B [illegible]
Probationary [illegible]
Mr [illegible] M R C S [illegible]
entered [illegible]
Mr [illegible] M B [illegible] M R C S [illegible]
Probationary [illegible]
Mr [illegible] M B [illegible]
Surgeon Lieutenant [illegible]
Mr [illegible] M B [illegible]
Lieutenant [illegible]
Mr [illegible] M B [illegible]
April 26, 1940
Mr [illegible] M B [illegible]
April 29, 1940
Mr D Walton [illegible] M S S A [illegible]
May 1, 1940
Messrs J C Rich [illegible] M B [illegible] M R C S
L R C P [illegible] as Probationary [illegible]
Mr D M Armstrong M B [illegible]
Lieutenant May 1, 1940
Mr D E Menzies M B [illegible]
Lieutenant May 3, 1940
Messrs A C Hendy M B [illegible] M R C S [illegible]
and [illegible] Davies M B C S [illegible]
Lieutenants May 1, 1940
Messrs W A Lyle M B [illegible] G A Bell [illegible]
Temporary Surgeon Lieutenants May 6, 1940
Messrs M Phillips M R C S [illegible] M B [illegible]
M B [illegible] entered as Probationary Temporary Surgeon [illegible]
Mr [illegible] M R C S [illegible]
Lieutenant May 14, 1940
Messrs H S G [illegible] M B [illegible]
entered as Probationary Temporary Surgeons [illegible]
Mr R J Hughes M B [illegible] Probationary [illegible]
May 14, 1940
Mr R D Stotter M B M R C S [illegible]
Surgeon Lieutenant May 19, 1940
Mr W B Rochester M B [illegible]
May 4, 1940
Mr [illegible] A Hampton M B [illegible]
Lieutenant May 2, 1940
Mr D R Barnes M B [illegible]
Lieutenant May 2, 1940
Mr D C Galloway M B [illegible]
Lieutenant May 6, 1940
Mr A G Leakey M B [illegible]
Lieutenant May 3, 1940
Messrs H Lucas M B [illegible] M B [illegible]
M B [illegible] entered [illegible]
Mr H C Brew M B [illegible] M R C S [illegible]
Surgeon Lieutenant [illegible]
Mr [illegible] J H [illegible] M B [illegible]
Lieutenant May 9, 1940
Mr N S Lockey M B [illegible]
Lieutenant May 2, 1940
Mr A Maitland M B [illegible]
May 17, 1940
Messrs [illegible] M B [illegible]

[illegible] Walter [illegible] MB [illegible] B E Hanlon [illegible]
Trauma [illegible] Ind Unners Temp[illegible]
May 21 [illegible]
Mr W [illegible] entered as Probationary [illegible]
Lieutenant [illegible]
Mr C W [illegible]
Surgeon [illegible]
Mr [illegible]
[illegible]
Mr [illegible]
[illegible]
Mr W [illegible]
May 27 [illegible]
Mr [illegible]
Lieutenant [illegible]
Mr H [illegible]
Lieutenant [illegible]
Mr C M [illegible]
May [illegible]
Mr [illegible] MB [illegible]
May 28 [illegible]
Mr G [illegible] and MB D I M & H [illegible]
Lieutenant [illegible] 1940
Mr J [illegible] of MRCS LRCP [illegible]
Lieutenant [illegible] 1940
Messrs W [illegible] LDS MRCS LRCP [illegible]
H H Johnston MRCS LRCP [illegible] entered as Probationary [illegible]
Lieutenants May [illegible] 1940
Messrs [illegible] MB ChB J W Bell MD [illegible]
MRCS LRCP [illegible] entered as Probationary Temporary Surgeon [illegible]
Mr C C Bharat MB MRCS LRCP entered [illegible] Probationary
Surgeon Lieutenant June 6 1940
Messrs [illegible] Wood MB ChB A D E H MRCS [illegible]
MB ChB entered as Probationary Temporary Surgeon [illegible]
Mr H Hoskin [illegible] MB entered as Probationary Temporary Surgeon [illegible]
June 3 1940
Messrs S M McCulloch LDS G E Marshall LDS [illegible] Wilson LDS and
G S N Walker LDS entered as Temporary Surgeon Lieutenants (D) May 14 1940
Mr C Lillie LDS entered as Temporary Surgeon Lieutenant (D) March 28 1940
Messrs R G James LDS M Hattan LDS A G Rayner LDS [illegible] N Weale
LDS F H Hinton LDS and B J Heilman LDS [illegible] Probationary
Temporary Surgeon Lieutenants (D) May 14 1940
Messrs J J Spencer LDS and R G Gwynne LDS [illegible] Probationary
Temporary Surgeon Lieutenants (D) May 28 1940
Messrs K W Aldom LDS G W Hughes LDS W Nicholl LDS and H H
Williams LDS entered as Probationary Temporary Surgeon Lieutenants (D) June 4
1940
Messrs S A Quantrill LDS A G W Moss LDS and J V Gaddie LDS
entered as Probationary Temporary Surgeon Lieutenants (D) June 18 1940
Mr H Allen LDS entered as Probationary Temporary Surgeon Lieutenant (D)
April 30 1940

PROMOTIONS

Acting Surgeon Lieutenant Commander C M Lapham MB ChB to be Surgeon Lieutenant-Commander April 23 1940

Surgeon Lieutenants A B Cormack MB ChB MRCS LRCP D P H T D G Wilson MB MRCS LRCP C M Lamont MB ChB and W I Reely MRCS LRCP granted acting rank of Surgeon Lieutenant-Commander February 7 1940

Surgeon Lieutenants I S Luffman MRCS LRCP and A M Espy MB F ChB granted Acting rank of Surgeon Lieutenant-Commander February 15 1940

Surgeon Lieutenant K W Marlyn MRCS LRCP to be Surgeon Lieutenant Commander April 27 1940

Probationary Surgeon Lieutenants T I David MRCS LRCP confirmed in rank January 28 1939 R I Hope BM BCh confirmed in rank December 30 1938 C G Rowarth MRCS LRCP confirmed in rank November 21 1938 F W Paul MB ChB confirmed in rank December 16 1938 M C Hold MRCS LRCP confirmed

in rank [illegible] M.R.C.S., L.R.C.P. [illegible] May [illegible] 1939. G. S. C[illegible] M.B., Ch.B. [illegible]

Temporary Surgeon Lieutenant [illegible] M.R.C.S., L.R.C.P. [illegible] L.R.C.P. & S. [illegible] Maingay, M.B. [illegible] A. G. [illegible] Hardy, M.B., Ch.B. [illegible] B.Ch. [illegible] M. C. Andrews, M.D., B.Ch., M.R.C.S. [illegible] M.B. [illegible] Carpenter, M.D., M.R.C.S., L.R.C.P. [illegible] rank of [illegible] Lieutenant Commander, February [illegible]

[illegible] Temporary Surgeon [illegible] M.B. [illegible] rank of Acting Temporary Surgeon [illegible] May [illegible]

QUEEN ALEXANDRA'S ROYAL NAVAL NURSING SERVICE

PROMOTIONS

[illegible] Sister Miss M. [illegible] A.R.R.C. [illegible] Acting Superintending Sister, May [illegible] 1940.

Nursing Sister Miss M. [illegible] Acting Superintending Sister, April [illegible] 1940.

Nursing Sister Miss [illegible] Acting Superintending Sister [illegible]

Nursing Sister Miss H. B. [illegible] Acting Superintending Sister, April [illegible]

Nursing Sister Miss K. M. [illegible] Acting Superintending Sister, May [illegible]

Nursing Sister Miss M. A. [illegible] Acting Superintending Sister, May [illegible]

Nursing Sister Miss H. [illegible] Acting Superintending Sister, J[illegible] 1940.

RESIGNATIONS

Nursing Sister Miss W. [illegible] March [illegible]

Nursing Sister Miss R. [illegible] [illegible]

A NAVAL OCCASION

CLINICAL MEETING IN H.M. HOSPITAL SHIP [illegible]

Enterprise is in itself a meritorious quality [illegible] the spirit of the pioneer and success [illegible] something worth pursuing [illegible] tell how great a matter a little fire may not kindle.

It appears that quite a number of Medical Officers [illegible] gathered in H.M.H.S. [illegible] on what was in all probability a unique [illegible] meeting at sea and in wartime. To attain their purpose they had to face all the nastiness of dirty weather and difficult boatwork, which in these latitudes [illegible] readily attend.

No effort was spared in showing the visitors the practice of the Hospital Ship in all its phases, and the [illegible] followed [illegible] social contacts.

On looking through the agenda one is struck by the good [illegible] of the demonstrators in the selection of cases for exhibition [illegible] in the sense of being [illegible] but rather [illegible] that many of the visitors might themselves encounter some day in their own [illegible] reminiscent [illegible] during their commissions at sea.

The treatment of burns [illegible] fractures of the [illegible] and the treatment of [illegible] figured in the surgical exhibits [illegible] stenosis [illegible] selections.

The Dental Department [illegible] and showed [illegible]

[illegible]

MINISTRY OF HEALTH—EMERGENCY MEDICAL SERVICES

THE EFFECT OF EXPLOSION BLAST ON THE LUNGS

[illegible]

ROYAL NAVY MEDICAL CLUB

Balance Sheet 1939-40

	£	s	d
Brought forward	6[illegible]	1	1
Received by Subscriptions	18	3	8
Received by Dividends	2[illegible]	1	1
	£108	4	1

	£	s	d
Running Expenses of Hon Secretary	8	1	8
Mr Cheshire (General Assoc ment)	9	6	0
Lyons & Co	23	3	8
Capitalised Bank Balance	74	8	0
	£108	4	2

(Sd.) C. H. M. GIMLETTE
Hon Secretary

The necessary Receipts and Vouchers against the above sums have been produced.

For Committee,

(Sd.) R. A. HALF
Surgn Cdr 20 4 40

(Sd.) A. W. NORTH
Surg Cdr 20 4 40

April 20 1940

A [illegible]

£18 War Stock 3½

£18 War Loan 3½

£[illegible] Consolidated Stock 4%

£1[illegible] Conversion Loan 1944-64

Notices.

[illegible] COMPASSIONATE FUND

[illegible]

[illegible]

[illegible]

[illegible]

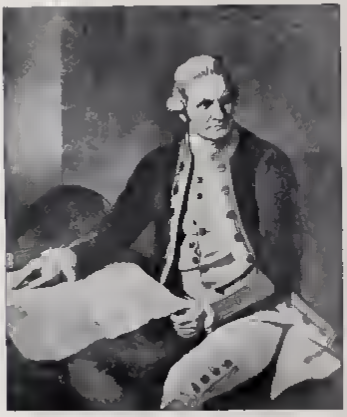
HYPOLOID [illegible] MULSALV

[illegible]

AMINOPHYLLINE

[illegible] cardial [illegible] ers it [illegible] owing [illegible] lar [illegible]

[illegible] Hypoloid [illegible]



ALLAIN [illegible]

VOLUME XXVI [illegible] 1940 No 1

Journal

of the

Royal Naval Medical Service.

Articles.

ABSTRACT FROM CAPTAIN JAMES COOK BY KELSON (190[illegible]) pp 331 341

By permission of the publishers Messrs [illegible]

ON 29th February 1776 Captain James Cook RN was [illegible] elected a Fellow of the Royal Society and his certificate [illegible] by no less than twenty six of the Fellows. He was [illegible] the Medal on which the [illegible] the presentation and [illegible] cess in holding with [illegible] moderate length was the most terrible [illegible] plainly set forth in the following extract from the Journal [illegible] first voyage.

> [illegible]

During Cook's early days [illegible] to find herself short handed through the [illegible] a few weeks and in a voyage [illegible] of the crew are known to have passed [illegible] under Cook's [illegible] HMS [illegible]

[illegible]

[illegible]

[illegible]

[illegible] probable that the marvellous health of the crew for the [illegible] was publicly recognised.

[illegible] is in fact in Orkney, the health of [illegible] [illegible] the Sandwich Islands, [illegible] [illegible] Mr Stephen, immediately after his arrival at Barrow [illegible] lost one man from sickness. He evidently means [illegible] other places in his journal that the main sickness [illegible] anonymous author of a story and he had in that time lost only [illegible] Mr Bond's [illegible] exposure to cold, three men [illegible] Mr Buchan from a fall, probably apoplectic, and one [illegible] drowning. The annual volume [illegible] loss of [illegible] [illegible] Bay [illegible] the [illegible] Bay [illegible] through [illegible] [illegible] probably predisposed to the Barrow [illegible] with other and indeed is so small that [illegible] [illegible] and from [illegible] forty [illegible] voyage of three years [illegible] returns [illegible] to the Lord [illegible] Admiralty [illegible] hardly [illegible] when [illegible] scurvy. [illegible] broken the [illegible] disappointed [illegible] loss he [illegible] claims on the [illegible] when he carried [illegible] result mainly [illegible] of three years and eight days.

Of the antiscorbutics [illegible] Mr Perry [illegible] following as the most [illegible]

[illegible]

Salmp was a decoction [illegible] of *Orchis* [illegible] common meadow plant [illegible] Salep [illegible] was at one time sold in [illegible] as a drink before the [illegible] and coffee. Mr Perry [illegible] thinks

[illegible]

> [illegible] the [illegible] of the sailors [illegible] Beef [illegible] Salt Butter [illegible] Melt [illegible]

[illegible] Museum [illegible] cake of this [illegible] which [illegible]

[illegible] cleanliness of the [illegible] which Cook [illegible] upon [illegible] of the first importance. [illegible] writing of the *Resolution's* voyage [illegible] very particular:

> [illegible]

[illegible] at least once a [illegible] and [illegible] they had cleaned their [illegible] and [illegible] The [illegible] by Palliser and Campbell [illegible] being [illegible] contained in an [illegible]

[illegible] whenever it was possible [illegible] Cook [illegible] the health of seamen [illegible] provided with a condenser [illegible] and he looked upon it [illegible] enough to preserve life [illegible] health. [illegible] *Adventure* [illegible] Captain [illegible] unnecessary [illegible] fresh water. Cook [illegible]

[illegible] recommended to the Admiralty the use [illegible] and the *Endeavour* was supplied [illegible] freshly ground [illegible] and then [illegible] remarked [illegible] were taken [illegible] possible [illegible] useful

[illegible] with one fifth part of [illegible] this treatment [illegible] much of its strength [illegible] is quite dry and [illegible]

[illegible]

With regard to the [illegible]

[illegible]

Proceed in [illegible] as anti [illegible]

[illegible]

Robert [illegible] The [illegible]

[illegible]

The Royal Society [illegible]

[illegible]

Speaking [illegible]

[illegible]

[illegible]

On joining [illegible] in the [illegible] Coplex Gold Medal [illegible] Cook RN and in the [illegible] in a derived from [illegible] concluded with the following [illegible]

If R [illegible] single [illegible]

Cook had been in [illegible] Pringle [illegible] finally [illegible] departure and [illegible] Mission.

During May 17[illegible] Cook [illegible] Dance RA (then [illegible] Canstead) who was [illegible] ass of him. He [illegible] medal in all the [illegible] Royal Hall of Gardens [illegible] the since

[illegible] ON THE RATIONAL METHODS OF TREATMENT [illegible] WITH SULPHAPYRIDINE (M & B 693)

[illegible] THESIS [illegible] M B BCh [illegible]

[illegible] Methods is already recognized [illegible] of gonorrhœa. There [illegible] the causes of failure [illegible] time. It was therefore [illegible] than 100 cases of gonorrhœa [illegible] risk in unusual changes in [illegible] biochemical [illegible]

[illegible] dosage [illegible] the light of the clinical [illegible] sulphapyridine [illegible]

[illegible] the [illegible] as they [illegible] U S A [illegible] cases [illegible] Recommendations [illegible] the [illegible] suffering [illegible] infection [illegible]

[illegible] assumed [illegible] properly [illegible] sulphapyridine [illegible]

[illegible]

[illegible] still going [illegible] Fully both clinically [illegible] at least once in every [illegible] In Group II the [illegible]

The tests [illegible] presence of sign and symptom [illegible] tests of [illegible] heart [illegible] logical. Summary [illegible] in this [illegible] the cids (a) [illegible] months [illegible] Discussion and Methods

The [illegible] and the [illegible]

[illegible]

The [illegible] the following [illegible] four hourly [illegible] months. [illegible] Results [illegible]

The results [illegible]

Number of [illegible]	[illegible]	[illegible]	[illegible]
All [illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible] of these [illegible] 693 this [illegible] Smears [illegible] other [illegible] four weeks [illegible]

Case [illegible]

[illegible] M & B 693 [illegible] Full dosage is [illegible]

[illegible] M & B 693 [illegible] M & B 693. The white cell count [illegible] M & B 693 as his [illegible] Leucocytes with [illegible]

[illegible] In the ordinary days [illegible] and urine [illegible] in the [illegible]

[illegible] M & B [illegible] This rating [illegible] in the [illegible] six per day [illegible] put on [illegible]

Notes Cases

[illegible] M & B 693 [illegible] Long given [illegible] hour. [illegible] X (St. Thomas). [illegible] Nurses [illegible] for the [illegible] and albumin in the form of [illegible] M & B 693 [illegible] with the object [illegible]

[illegible] the des[illegible] [illegible] level the same [illegible] which was one that [illegible]

The results were as follows:

Number of cases in Group II— [illegible]	[illegible]	[illegible]	[illegible]
All [illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

[illegible] to M & B [illegible]

Cases [illegible] in Group II

Case [illegible].—[illegible] M & B 693. [illegible] months. [illegible] M & B 693 [illegible]

[illegible] White cell [illegible] when good [illegible] given as in Group II [illegible] weeks [illegible]

Case 71.—[illegible] M & B [illegible] The blood sulphapyridine [illegible] no improvement [illegible] urethroscope [illegible] impossible even with the smallest [illegible] which showed a small [illegible]

[illegible] warm normal [illegible] hours. After [illegible] treatment with M & B 693 [illegible] the gon[illegible]

[illegible] level of sul[illegible] recovered in the [illegible] drainage [illegible] previously with [illegible] means. [illegible] primary attacks [illegible] as in Group II [illegible] improved [illegible]

[illegible] M & B 693. This [illegible] before [illegible] with six tablets [illegible] having [illegible] with mixture. On [illegible] by shunted subac[illegible]

He [illegible] signs in six days. Sul[illegible] for any further relapse.

[illegible] This rating [illegible] with M & B 693 [illegible] further fever eight [illegible] partial. Urethra [illegible] as well as many [illegible] tablets were fed [illegible] individuals [illegible] found in eight [illegible] treatment [illegible]

[illegible] Kingdon [illegible] the Lancet from [illegible] Dominion Act Mes[illegible] This case [illegible] series [illegible] The rating [illegible] and by the sixth [illegible] and the rating [illegible]

[illegible] slight [illegible] tickle [illegible]

[illegible]

[illegible]

[illegible]

Serial blood counts were also taken [illegible] white cells. The total white cell count prior to the initial [illegible] was 10,900 cells per c.mm. The lowest figure reached after the first [illegible] had been given (viz. eighteen hours) was 5,600 cells per c.mm. The white cell count then rose to 7,500 cell per c.mm. after the next three hours and between this level and 5,800 mm. the morning, but never rose.

Although large doses were [illegible] and although [illegible] were as stated [illegible] papers were published.

Similar graphs were obtained in [illegible] and similar results which [illegible] the [illegible] of M & B 693 blood levels were obtained in other cases after the administration of fourteen to sixteen tablets of M & B 693 were as follows:—

Case 5—[illegible] mgm. per cent	Case 80—4·8 mgm. per cent
Case 76—4 mgm. per cent	Case 81—3·4 mgm. per cent
Case 9—3·1 mgm. per cent	Case 88—2 mgm. per cent
Case [illegible]—1·8 mgm. per cent	Case [illegible]—1·9 mgm. per cent
Case 70—[illegible] mgm. per cent	

[illegible] blood M & B 693 [illegible] these cases was 3·9 mgm. per [illegible] all the sixteen taken [illegible] were present [illegible]

[illegible] tables and [illegible] of [illegible] high differ [illegible] per cent [illegible] sulphapyridine [illegible]

[illegible] the figures [illegible] and the [illegible] taken [illegible]

[illegible]

	Second group
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

Discussion

[illegible] would appear that in Group I [illegible] between cases of all types and [illegible] days. Likewise in Group II the difference was only 6 [illegible] days. The notable difference appears in the mixed cases between the [illegible] and the second group—viz. first group average for all cases [illegible] and thus for the second group 6·7 days while in first attack cases the first group was 9·0 days and the second group 6·0 days.

Briefly the difference in treatment was that whereas Group I cases received

[illegible]

[illegible]

[illegible]

[illegible] may produce [illegible]

[illegible]

[illegible] Danger of toxic and other [illegible]

(1) Rapidly [illegible] maintaining between [illegible] 2 to 4 [illegible] hours. Limitation of final [illegible] this period [illegible] (2) Adequate urinary [illegible] by the administration [illegible] (4) Restricting [illegible] administration of alkalies [illegible] This was to offset [illegible] sulphapyridine in [illegible]

[illegible] maintenance dose [illegible] vaccine [illegible] themselves. The [illegible] inadequate.

[illegible]

[illegible] was paid [illegible] treatment with [illegible] (3) [illegible]

[illegible] in cases [illegible]

[illegible]

[illegible] (2) [illegible] [illegible] (3) [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] chemical [illegible] [illegible] requisites in [illegible] [illegible] [illegible] [illegible] crystal [illegible] alphapyridine [illegible] [illegible] in the urine [illegible] [illegible] careful [illegible] [illegible] Both [illegible] made an uninterrupted recovery

It is essential to take the following precautions against possible harm [illegible] stone formation and in cases which M & B 693 is being given —

(1) History of possible preexisting renal disease should be excluded (2) Alkalies should be administered during treatment (3) Vegetarian diet should be given to produce an alkaline reaction in the urine (4) Frequent examination of the urine for red blood cells should be carried out (5) Patients must be instructed to report at once with onset of backache

With the onset of haematuria or the appearance of red cells in the urine the drug should be discontinued and the case later treated by the other methods if not free from infection

Summary

(1) Results are recorded of the treatment of 100 cases of gonorrhœa with a short intensive course of M & B 693

(2) Modification of the intensive course by administration of this drug throughout both day and night together with a single dose of [illegible] [illegible] greatly improved results

(3) Average duration of disease is reduced to six days

(4) Failures met with appear to be due in most cases to unilateral local drainage Hence the need for routine urethroscopy

(5) Complications met with are given in detail and their significance and treatment discussed

Acknowledgements

I wish to express my appreciation and gratitude to Surgeon Captain G R McCurren for permission to publish this work Surgeon Commander A C Anderson and Surgeon Commander J M Hayes for allowing me to treat these cases in the G U Department and Surgeon Commander F W Bingham for permitting me to carry out the biochemical estimations in the laboratory of the Royal Naval Hospital Plymouth

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(1) [illegible] Studies in the Medical [illegible] [illegible] and Sulphanilamide [illegible] [illegible] Med [illegible] 1940

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[illegible] IN NORTHERN NIGERIA

[illegible]

[illegible]

[illegible]

Moderate wind will [illegible] hinder [illegible] hump heat and attr[illegible] [illegible] biting propensities [illegible] [illegible] the communal [illegible] [illegible] [illegible] stimulate the [illegible] [illegible] conditions and they will [illegible] [illegible] [illegible]

In the great majority [illegible] [illegible] on ground the rudiment [illegible] [illegible] biting and mating [illegible] Only in more [illegible] these measures [illegible] [illegible] protection [illegible] daylight is almost [illegible] [illegible] is therefore not [illegible] [illegible]

In establishing these [illegible] which they [illegible] [illegible] guided [illegible] the last night first [illegible] Meteorological [illegible]

Station	Height m	Degrees	Minutes	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	6	71	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Alt[illegible]	0·8	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	May [illegible]	[illegible]
Tromsö	11·8	11	[illegible]	15	[illegible]	[illegible]	[illegible]	—	[illegible]
Bodö	2	17	[illegible]	[illegible]	6	3	[illegible]	May 16	[illegible]
Trondhjem	19	11	[illegible]	15	11	25	[illegible]	May 11	[illegible]
Bergen	17·5	60	3	[illegible]	0	21	[illegible]	April 19	[illegible]
Oslo	21·2	59	[illegible]	[illegible]	16	43	[illegible]	April [illegible]	[illegible]

As a working figure one might assume that it will be [illegible] [illegible] two to three weeks after the date. Similarly one may [illegible] the plague will abate before the date at which it might [illegible] the mosquito season will be shorter than in the north.

A few actual dates are available. At Murmansk [illegible] emerged when Naval [illegible] on June 4 according to [illegible] Lt. F. A. Cuckayne, serving in HMS *Daffodil* [illegible] the Kola Peninsula from June 6 and [illegible] followed by enormous numbers after a few days. [illegible] week in August some time before the first. At [illegible] the summer of 1939 started [illegible] June 12 (K. McIlwaly).

Types of mosquito communicated:

Aedes punctor	Persistent [illegible]
Aedes communis etc.	Early [illegible]
Theobaldia [illegible]	[illegible]

[illegible] species — *I. maculipennis* being the commonest and most widely distributed of the three. Four generations are produced in the year. The insect hibernates as an adult. *A. bifurcatus* and *A. plumbeus* occur in southern Sweden, but there are no Norwegian or Finnish records.

Biting insects.—In many parts of Scandinavia biting flies, rather than [illegible] are very troublesome.

The large clegs or horseflies (Tabanus, Chrysops, etc.) are often numerous; many of them will bite human beings. The only redeeming feature is that they are large and slow moving, and are easily killed.

Much more serious and difficult to deal with are the small midges (Culicoides) and blackflies (Simulium). The blackflies in particular are a serious pest. They can penetrate netting which would exclude mosquitoes. Their bites not only pierce the skin, but rasps the surface, and may produce serious sloughing followed by chronic septic lesions.

Simulium breeds in running water; its distribution is therefore somewhat [illegible]. Control of the larvæ by oiling of streams is impossible as they do not [illegible] the surface.

A species of wasp occurs in more alpine districts. Its sting produces severe illness, and the effects, which last for several days. The nests are nearly constructed in a ball 6 or 8 in. in diameter, sometimes on the ground, sometimes up in birch or willow trees.

Body lice are said to be very common among the less enlightened inhabitants of the far North.

Protection of Personnel

Repellents for application to the skin.

Citronella oil is the best known deterrent. By itself it is evanescent and may irritate the skin in some people. It is therefore combined in a mixture with hard and soft paraffin to make a firm paste which can be carried about and will not run.

Ships proceeding to the Narvik area were supplied with one of the two following forms of Naval anti-mosquito paste:

(a) R	paraff. dur.	31 parts
	paraff. moll.	11
	cera flav. (beeswax)	20
	ung. stearic	10
	saffrol (brown oil of camphor)	10
	ol. citronel.	10
R	paraff. dur.	33 parts
	paraff. moll.	50
	cera flav.	8
	ung. stearic	17
	saffrol	[illegible]
	kerosene	100
	ol. citronel.	408

[illegible] make 1,000 grams.

[illegible] used by the Army and is understood to be [illegible] lasting in its effect than most other formulæ

Anti mosquito cream

B. [illegible]	18·5 per cent
[illegible]	1·0
[illegible]	9·0
[illegible]	26·7
Paraffin soft white	45·0

Melt the paraffin and add the other ingredients, stir well [illegible] and cool rapidly by placing bottle in cold water.)

This cream seems to have an effective lifetime of about six hours and does not stain clothes. It was issued by the Army in 1 oz. screw top containers. Tests during two years in India and elsewhere have proved it to be efficacious.

A simplified prescription Dover's cream was formerly used but was found to be too greasy.

℞ Oil citronel	½ oz.
Spiritus camph	½
Oil cedar wood	½
Vaselin	1

Another culicifuge P.C. Oil (Paraffin—citronella) is considered to be inferior and has been superseded in the Army by the anti mosquito cream. It was identical with the common Bamber oil preparation.

℞ Oil citronel	1½ parts
Paraff. liq.	1 part
Oil cocoanut	2 parts
Acid carbol.	1 per cent

A formula sometimes used is

℞ Oil cinnamon	[illegible]
Oil eucalyptus	℥ss
Formalin (40 per cent. formaldehyde)	℥j
Alcohol 90 per cent.	ad ℥v

N.B. This preparation irritates the skin if the [illegible] hot water.

Carbolic is often recommended *vide* A.F.O. 1796/40.

℞ Acid carbol.	[illegible]
Oil [illegible]	[illegible]

N.B. To be labelled "not rubbed."

Other applications are:

Dilute magenta (1 in 10) (stinging and consequent itching).
Cod liver oil rub in.
Ichthyol (proprietary).
Juice of fresh leaves.
Personally locally distilled [illegible] oil or turpentine [illegible] and oil.
Mixed with vaseline and applied [illegible] valuable [illegible] and oil and [illegible].
Hydrex [illegible] Flit may be [illegible] and [illegible] will [illegible].
The standard name offered is Stockholm tar but this is [illegible] and may not [illegible]. Moreover the [illegible] of tar [illegible] freely smeared on skin [illegible] may be dangerous [illegible] to [illegible].
Another local [illegible] of [illegible] back [illegible]

Special Clothing

[illegible] exposed to the mosquitoes should be issued with [illegible] pieces of strong, closely woven [illegible] The nets must [illegible] with a steel helmet and fall [illegible] the shoulders [illegible] The Army pattern [illegible] the helmet, the [illegible] ing, but keeping the net [illegible] the face. The [illegible] the neck of the shirt all round. The helmet should [illegible] for the strength of the [illegible] of sun [illegible] to adjust it [illegible] with [illegible] of headgear [illegible] hard rubber [illegible] to carry the material away [illegible] requirements. A [illegible] of [illegible] sailors straw hat used is very serviceable. The [illegible] cells to be lined with strips [illegible] the net.

Mesh. A [illegible] holes to the square inch and material of 30/40 cotton is effective against mosquitoes, but where the minute midges and sandflies abound the finer mesh is said to be preferable.

The Oxford University Museum expedition used a head net of black muslin 53 mesh successfully.

These nets are commonly made of strong butter muslin similar to that used for butterfly nets. Experience has shown that they should be preferably [illegible] or black, not white, edging, and that good vision is obtained through [illegible] darker nets.

Nets easily get torn; there should be a large reserve supply.

One must wear fairly thick clothes and underclothes in order to remain [illegible]. Without the two protective layers great numbers of the insects will [illegible] through shoulders and other places where garments are stretched over [illegible]. Waterproof clothing is very efficient. Obviously no one must wear [illegible]. The British Museum states that two pairs of thin socks give good protection.

Living Quarters

[illegible] generally useful means of screening living quarters, tents and [illegible] with mosquito netting. Tents can be lined with mosquito [illegible] the curtains and tent holes. The hole should be about 10in [illegible]. Shower tents are recommended. Also the ground sheets to be [illegible] hills. The new Army pattern 2 man bivouac, 7ft long, 3ft high, [illegible] and spread of 6ft, has the ends made of netting and sand flaps. [illegible] keep out the insects. A considerable supply of wire gauze pattern 30/40 mesh as is used for proofing tropical houses is extremely valuable for doors and windows of buildings.

Spraying quarters with insecticide fluid is also important. This method is intended to kill not only to repel the insects, and for the purpose the spray

[illegible] Cinnamon [illegible] [illegible] [illegible]

are [illegible] ing bites but food in fondling [illegible] cure of [illegible]

TREATMENT

As to treatment for actual bites experienced travellers recommend the following methods —

Use of lotions such as (*a*) Carbol-Calamine [illegible] calamine lotion with 2 per cent acid carbol

(*b*) 2 per cent liq picis carb in ointments containing 2 per cent [illegible] carbol liq picis carb or menthol

Bitten areas frequently become septic and will need treatment *secundum artem*, with antiseptic or saline baths and boric fomentations and incision if suppuration ensues

Susceptible people are occasionally so severely affected as to become seriously ill The practice is to treat these cases in bed give copious fluids purge and persevere with the local applications As a rule they recover within a few days and are found to have acquired a considerable degree of immunity to further attack

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THE TREATMENT OF BURNS

By W C WILSON

COMMENTATED BY J H HEBB M B
Ministry of Health

In this memorandum the term burns includes injury by moist heat (scalds) as well as by flame The simplest classification according to depth is employed namely *superficial* burns which involve only the skin and *deep* burns which penetrate to subcutaneous tissues Only the coagulation methods of treatment are recommended and described

The first consideration in the treatment of burns is to save life secondary objectives are to promote healing and to prevent deformity It is the *extent* of the burn rather than the depth which endangers life and all injuries involving more than 25 per cent of the body surface carry a serious threat to life particularly during the first four to five days after injury During that period the general treatment of systemic disturbances demands special care and attention The local treatment of the burned area is also important but [illegible]

[illegible] surgical therapy helps to minimize [illegible] disturbances and thus restore life and is essential for the attainment of [illegible] objectives. Before proceeding to details of treatment it is necessary to [illegible] the theories of the pathological processes in burns and the principles upon which treatment is based.

The Cause of Death in Extensive Burns

(1) Initial (primary) Shock.—This is a condition resembling fainting or syncope which arises immediately after injury. Apart from burns it occurs in an extent which are rapidly fatal; this form of shock is rare and of little practical importance. It responds readily to treatment by warmth and relief of pain.

(2) Secondary Shock.—This is the commonest and dangerous form of shock after burns. The probable mechanism is as follows. Plasma escapes from the blood stream on the surface and in the tissue spaces of the burned area through the walls of many minute blood vessels which have been injured by excessive heat, possibly some plasma loss occurs also in underlying tissues by a similar mechanism. As a result of plasma loss the volume of blood in circulation is reduced, the output of the heart decreases and, unless by compensatory processes the blood pressure falls. The volume of plasma in circulation is maintained in part from the reserves of tissue fluid which have a very low content in protein and thus the concentration of protein in the plasma is lowered. Since the diminution of blood volume is due to loss of plasma only, the concentration of corpuscles is raised especially in the blood in peripheral capillaries. If the circulatory failure and consequent anoxia are severe and prolonged irreparable damage is done to vital structures such as the central nervous system and the heart and the failure becomes irreversible.

As yet there is no reliable criterion of early or developing shock; consequently secondary shock is a dangerous and treacherous condition. The following signs however are suggestive of incipient shock: a lowering pulse pressure (the difference between systolic and diastolic levels), increasing pulse rate, thirst, restlessness, and increasing impairment of consciousness. *Established* shock which it should be recognized is in *[illegible]* of circulatory failure is indicated by a lowered systolic blood pressure, rapid feeble pulse, rapid shallow or irregular respirations, drowsiness or apathy, thirst, vomiting, greyish pallor and usually subnormal rectal temperature and increased corpuscular concentration. Some degree of secondary shock occurs after most extensive injuries; the onset is between an hour and two hours after injury, usually during or after local treatment. Shock is easily precipitated or aggravated by exposure to cold, pain, loss of fluid and depression of vasomotor centres.

(3) Acute Toxaemia.—This is a condition which has the features of intoxication. Available evidence suggests that it is caused by toxins pro-

[illegible] injured cells in the blood [illegible] and absorption [illegible] albumin. Anuria and albuminuria probably [illegible] reach a maximum between fifty and [illegible] hundred hours. The liver [illegible] the attack [illegible] the liver cells which have [illegible] degenerated and [illegible] by bacterial invasion and activity in [illegible].

[illegible] between twelve and twenty-four hours but [illegible] sixty hours. The main features of a pro[illegible] [illegible] persistent restlessness preceding, in their [illegible] pallor, vomiting, continuous if altered [illegible] albuminuria and [illegible] finally the blood pressure falls as [illegible] and approaches [illegible] associated with increased corpuscular concentration is evidence of [illegible] information. The secondary values con[illegible] but the severe forms in temporarily [illegible] is less common in deep [illegible] superficial burns and is more [illegible] closely related to the [illegible] of injury as shown in severe [illegible] shock. On the other hand [illegible] other [illegible] expression methods of treatment.

(*b*) Sepsis.—Bacterial infection is [illegible] usually premature [illegible] superficial [illegible] local treatment is [illegible] the injury and then the [illegible] of the burned area is adequate. [illegible] is premature but [illegible] organized in deep burns. Under proper [illegible] treatment is seldom [illegible] the second week in neglected [illegible] however [illegible] may [illegible] and [illegible] in [illegible] burns. [illegible] common invader is the [illegible] pyogenic [illegible] and [illegible] are less frequently [illegible] and other [illegible] rarely [illegible].

[illegible] therapy is employed the skin [illegible] [illegible] points of superficial [illegible] and [illegible] and [illegible] in deep burns [illegible] the liver of exudate which [illegible] between the [illegible] and the necrotic tissue. Liquefaction of the [illegible] and [illegible] suppuration follows and [illegible] septicæmia and pyæmia supervene.

[illegible] (*a*) Respiratory Tract Lesions.—This is primarily [illegible] through inhalation of flame [illegible]. The common lesions are [illegible] and pulmonary [illegible] and [illegible] infiltration [illegible] and tracheal sloughing are present in the upper respiratory passages.

(*b*) Duodenal Ulceration.—This rare complication is usually [illegible] and [illegible] and extends [illegible] which have become infected. The thesis [illegible]

trate deeply and may cause perforation of the intestine [illegible] tenth day.

Pathologic Physiology.

(1) Initial Shock.—[illegible] by [illegible]

(2) Secondary Shock.—[illegible] it has developed it must be regarded [illegible] The amount may [illegible] depend on the duration of the perforating [illegible] [illegible] to the [illegible] [illegible] and the effects against shock [illegible]

Plasma loss should be [illegible] for this purpose and should be given in [illegible] to a normal level of blood-pressure. [illegible] gum saline is a satisfactory substitute. While [illegible] disadvantage that it may [illegible] Intravenous injections of non-coagulable [illegible] saline are [illegible] in the treatment of secondary shock. Such solutions pass rapidly [illegible] vessel walls and cause [illegible]

Simultaneously with [illegible] the treatment to restrict further [illegible] of the bowel. This is achieved by [illegible] coagulating solutions should [illegible] and has other [illegible] Saline is frequently [illegible] advantage of the weaker [illegible] that oxidation of fluid [illegible] hours. The weaker [illegible]

Additional measures [illegible]

(3) Acute Peritonitis.—[illegible] of the injected solution [illegible] vent the spread of infective [illegible] successful. If [illegible] clinical [illegible] by slow [illegible]

(4) Sepsis.—The [illegible] treatment [illegible] inevitable layer of [illegible] revenues for [illegible] the [illegible] affected the separation [illegible]

[illegible] antiseptic solutions are used to inhibit [illegible] with an [illegible] of the area. If signs of hæmolytic streptococcal infection appear, [illegible] penicillin or sulphapyridine is administered.

(3) Complications. Swelling of the upper air passages is relieved by [illegible]. Pulmonary lesions are treated by prompt and [illegible] and oxygen.

Treatment

The details of the treatment of burned individuals will depend upon the circumstances.

(1) The Extent of the Injury.—Patients with burns of less than 5 per cent of the body surface can be treated as out patients at casualty clearing hospitals. If there is great pain or fluid accumulation, some patients with injuries up to about 10 per cent can be treated in the same way. Burns of between 5 and 15 per cent are treated with the same local measures as for out patients, but the patients are admitted to the hospital for a few days. Patients with injuries greater than 15 per cent of the skin surface are treated in hospital until healing is well advanced.

(2) The Facilities Available. Two methods of coagulation treatment will be described: (*a*) Immediate coagulation followed by exposure of the burn till the coagulum is removed. All extensive injuries should, if possible, be treated by this method which is the safest and most efficient. The necessary equipment, however, is usually available only in large general hospitals. (*b*) Coagulation by a jelly preparation or a solution applied on dressings which are removed till the coagulum is separated, that is without exposure of the raw surface. If the first method is not feasible the second can be used for extensive burns. The second method is the more convenient for the treatment of injuries of lesser extent when the patients are not kept in hospital, or are [illegible] for a few days.

Treatment of Extensive Burns

A. *Immediate Coagulation followed by Exposure of the Burned Surface*

(1) On Admission to Hospital.—Morphine is injected hypodermically, and the patient is kept quiet and wrapped in blankets after a rough estimate has been made of the extent of injury. An assess the general condition of the patient, pulse and respiration rates and rectal temperatures are recorded. [illegible] at least every hour for the first 24 hours, and every 2 [illegible] for the next [illegible] days. The hæmoglobin content of capillary blood [illegible] and rectal [illegible] is estimated several times daily for several days, as an [illegible] of the condition of the blood. The patient's blood group is determined [illegible] tested against the plasma to be injected. Note. Citrated [illegible] plasma from Group AB (4) donors can be used without preliminary

[illegible]

[illegible]

[illegible]

[illegible] thirty [illegible] [illegible] [illegible]

bulbs in the [illegible] formation is regulated by an electric [illegible] Small cages [illegible]

During the [illegible] applications [illegible] times daily [illegible] through [illegible] coagulum fall [illegible] applications of the coagulum [illegible] ters and lis[illegible]

After the [illegible] the coagulum [illegible] the coagulum [illegible] Epsom salts [illegible] parts. The [illegible] pressed off superficial [illegible] Drink [illegible] any tom [illegible] pure [illegible] rock. When opium is [illegible] the gland [illegible] with [illegible] per cent solution [illegible] found the exudate is cleared off

Sepsis may develop and [illegible] coagulum. The [illegible] depends upon the severity and extent of the infection. [illegible] localised all that is necessary [illegible] the infected area and to apply hypertonic [illegible] Wet [illegible] sloughs in deeply burned areas [illegible] the underlying tissues usually becomes sodden and pasty. Hard [illegible] and around the sloughs. [illegible] tissue. When the [illegible] remains dry and hard [illegible] the [illegible] general condition indicates [illegible] the [illegible] should be removed from all areas of suspected infection. One plan is to [illegible] the coagulum by applying hypertonic [illegible] and [illegible] this should prevent [illegible] Another plan is to [illegible] and [illegible] allow the coagulum and slough to slide.

The treatment of the granulating [illegible] is as follows. A mixture of applications [illegible] paraffin and [illegible] becomes sluggish [illegible] required in percentage [illegible]

B. *Coagulum Without Sub[illegible] of the Burned Surface*

This treatment is employed [illegible] when the method described above is not feasible [illegible] opium such as heming cages. The general treatment is the same as [illegible] It should be emphasized that coagulum treatment by any method [illegible] pulmonary [illegible]

epidermis and preparation of the injured surface as described above. In this method the coagulating agent is incorporated in a matrix of hot jelly base.

The jelly preparation

Tannic acid	[illegible]
Glycerin	1
Tragacanth	3
Acetic acid	[illegible]
Water	[illegible]

After preliminary cleansing of the surface the jelly is applied in a thick layer over the entire raw surface and is covered thickly on gauze which is then applied and covered with one or more layers of dry gauze and bandaged and the whole secured by bandages. The outer layers of the dressings are removed at intervals of four days for inspection of the gauze next the burn. In parts which remain dry and odorless this layer of gauze is left undisturbed till the coagulum peels off. In moist areas fresh applications of jelly are made. The time of separation of the coagulum is similar to that in the case of the burns. Subsequent treatment is as already described.

Treatment of Burns of Small or Moderate Extent

Patients with smaller injuries may be allowed home within a few hours of their injury or kept under observation in hospital for a few days.

The preparation of the burned area is carried out as in extensive injuries. Usually general anesthesia is required. The jelly preparation is applied on lemons. The patient is instructed not to allow the dressings to become wet. In favorable cases the first inch the dressings may be left alone for five or four days, when the coagulum can be readily removed.

First Aid Treatment

Instructions to Medical Personnel

If pain is severe give a hypodermic injection of morphine (gr. 1/4 for adults). A note of the dose and time of injection should be sent to hospital with the patient. Do not remove clothing. Applications are made only over exposed portions of the burn. The safest application is sterile dry gauze. If this is not available clean dry sheets, towels or cloths are used to cover the parts. The patient is well wrapped in blankets and should be kept warm during transport to hospital. It is considered that any ordinary dressings that might be gained from first aid application of burn jelly or coagulum solution are outweighed by the risk, especially in extensive injuries of exposure to cold and pain. The pain of burns is more simply and adequately controlled by morphine than by local applications.

Instructions to Lay Personnel

If the patient's clothes are in flames do not allow him to run about, particularly out of doors. Smother the flames by wrapping a blanket or rug around

[illegible] and [illegible]. It is better to [illegible] than to pour water [illegible] warm [illegible] possible [illegible]. While waiting [illegible] by short [illegible] warm by [illegible] and placing *pads* [illegible] outside the [illegible]. [illegible] remove clothing [illegible] the [illegible]. Do *not* [illegible] the [illegible] oil grease [illegible] castor oil [illegible].

THE COVER TEST FOR NEAR

By Surgeon Lieutenant-Commander NIGEL CRIDLAND, D.O.(Oxon), R.N.V.R.
H.M.S. St [illegible]

The regular medical examination of flying personnel, as part of the Medical Officer's duties, is an irksome task, and it reveals the occasional part of the examination is liable to be a useful but superfluous. But the pilot's capacity to land an aircraft consistently is dependent on the possession of stereopsis (the quality of stereoscopic judgment) which functions under conditions of minimal strain. Although the various experiences of the medical and personnel have so far shown that the flying personnel is in bulk free from the difficulties that hinder stereopsis, yet there are those individuals in whom the strain in modern aerial business suddenly or gradually overt and overpowering. It is the responsibility of the Medical Officer to recognize and pick out these individuals, for the failure of stereopsis—wholly or here contemporaneous with the failure of binocular vision—leads to minimal results. This test, only the investigator's and the concentrate, is provided for the examination, and which the [illegible] test is simple and carries standards which are both of the [illegible] of value only when aided by a thorough knowledge of the [illegible] and by the acute observation [illegible].

The technique of the test is described in Ai Pathfinder [illegible] simple [illegible] as to various points of [illegible] and [illegible] value. The eye must be covered completely and completely [illegible] concentrated quickly, the peripheral [illegible] in determining fusion which is efficient [illegible] points are not observed. The finger [illegible] should be such as will [illegible] the [illegible] difficulties [illegible].

enough before removing the cover to ensure that the eye is really fixing it and is also focused on it It is of great assistance to watch the point where the covered eye is to appear on uncovering so that the slightest movement may be appreciated to look as it were, through the cover Finally, the first observation is incomparably the most important the value of subsequent ones will be vitiated by the effect of training In view of this the urgent necessity for an exact routine is obvious only so can comparison be made between the results of this and previous tests

Three factors play their part in determining the direction of the deviation the refraction of the fixing eye the heterophoria at infinity and the basic accommodation-convergence ratio the effect of each factor can be examined by keeping the other two factors at the normal level and varying the factor under discussion In the case with emmetropia orthophoria at infinity and a basic ratio between accommodation and convergence of 1 1 at any distance of fixation the convergence required is exactly provided by the amount of accommodation in use and the fusion reflex has no need to override the simpler reflexes by excitation or inhibition of convergence There will therefore be no deviation on covering the eye Hypermetropia of the fixing eye by demanding an amount of accommodation greater than the emmetrope needs for that distance will produce an excessive convergence of which the superfluous part will be inhibited by the fusion reflex On covering the eye the fusion reflex no longer holds sway and the inhibition of the superfluous amount of convergence ceases this then becomes apparent as a latent convergence Similar reasoning shows that myopia of the fixing eye will produce a latent divergence for the myope needs less accommodation than the emmetrope at any given distance of fixation Now the ametrope by reason of the fact that he is constantly having to produce under the prepotent demand of the fusion reflex either more or less convergence than is provided by the simpler reflexes tends to develop a perverted ratio between accommodation and convergence (which is here called the "basic abnormal ratio) This basic abnormal ratio is intermediate between the normal ratio and the ratio to which he is driven at the command of the fusion reflex. It follows therefore that the hypermetrope will produce less convergence and the myope less divergence, than would be expected from his refractive error on the normal ratio but more of either deviation respectively than if he were emmetropic (in which case there would be no deviation) It is generally accepted that the normal ratio between accommodation and convergence is not 1 1 but 3_4 metre-angle of convergence per dioptre of accommodation. This in no way disturbs the sequence of the argument but means that all cases will show more divergence or less convergence than is expected on the 1 1 ratio

The convergence pre-fixed by the two factors already discussed is added on to the existing position of the eyes when no accommodation is in use and fusion is suspended. This existing position is closely akin to the heterophoria at infinity. Any pre-existing heterophoria will thus modify the deviation produced by the other two factors. The exophoric will therefore show more divergence or less convergence than the orthophoric in whom the other two factors are the same, and the esophoric will demonstrate converse reactions.

It is clearly seen therefore that the direction of the deviation is in no way dependent upon the candidate's desire for binocular single vision; it is purely the resultant of these three factors, of which two can be determined by other means. If the size of the deviation were to be measured the haste ratio could be evaluated. It would be of no clinical use when obtained, and in any case it can be guessed with reasonable accuracy from a knowledge of the other two factors.

The ground-mist having been cleared away, it is now possible to see in what resides the value of the cover test. It is in the speed of the recovery, and note that it is not the time but the speed of the recovery which is significant. The eye will naturally take longer time to recover from a large deviation than from a small one, but the speed of recovery, that is the rate of movement of the eye, may well be the same. The removal of the cover results in the image of the fixation-object falling upon the retina of the previously covered eye; if a deviation has occurred the image will fall not on the macula but on some other point which will necessarily have a visual acuity below that of the macula, and the greater the distance between the point and the macula the lower will this visual acuity be. The larger the deviation therefore the less easily is diplopia recognized by the candidate, but the irritation of this is small. The fusion reflex is initiated by this recognition of diplopia, or depends for its final effect upon the efficiency of the motor apparatus (which is again not greatly variable in the cases under consideration) and also upon the sensitivity of the fusion reflex. Upon this sensitivity depends the binocular co-operation on which rests stereopsis, and the assessment of this sensitivity is a measure of the stability of the binocular co-operation. This stability of binocular co-operation is a delicate index of the fitness of the whole organism, and when comparison is available with other tests will materially assist the decision of the Medical Officer as to fitness for flying duties. The speed of the recovery is therefore a measure of the stability of the binocular co-operation, while the time of the recovery is a guide only to the duration of the binocular incapacity. It is for this reason that the speed of the recovery is so important.

Five types of recovery are seen, as always with any grouping, but for

line cases occur of which the classification is difficult. But the five groups will be found sufficient for all practical purposes. The first three are the rapid, the medium and the slow recoveries; then comes the recovery after a lag, in which there is a definite period of time when the eye is stationary before it begins the movement of accommodation. Finally there is the group in which no recovery occurs. Only experience can enable the examiner to determine the place in which group a particular recovery belongs, but the following hints may help. The rapid recovery is a quick "snap" back into place, not unlike the recoil of a piece of lightly stretched elastic when it is released. The slow recovery is reminiscent of nothing so much as a leisurely stroll, frequent pauses to look at objects of interest. The recovery after a lag is usually medium and often jerky; the lag is not significant if the examiner has any doubt of its occurrence. Finally, it is to be noted that a patient convergence will almost always recover more slowly than an divergence of the same size; this is probably because convergence is a positive movement, while divergence is best regarded as an inhibition of convergence.

SUMMARY

1. The [illegible] of the deviation is the resultant of three factors, the [illegible] the [illegible] of the infinity, and the basic accommodation [illegible].

2. The direction of the deviation is unimportant; the speed of recovery is [illegible] to be obtained from the test.

3. The test [illegible] of paramount importance.

OSTEOCHONDRITIS DISSECANS WITH REPORT OF TWO CASES INVOLVING THE KNEE JOINT

BY SYDNEY CAMPBELL REX WILLIAMS, M.B., B.S., R.N.
R.N. Hospital, Haslar.

In 1887 a condition was described by Konig in 1888 and named by him [illegible] only since the last war has any great interest has been taken in it, and we still have insufficient knowledge of the ultimate prognosis and the [illegible] treatment. It is thought that the etiological factors would make the disease relatively common in the Service and that cases have probably been overlooked in the past. The importance of the late follow-up [illegible] cannot be too greatly stressed.

Definition.—It is this disease is an aseptic necrosis of the articular end of a [illegible], usually under the articular cartilage. It is found most [illegible] in the long tubular bones in the knee joint and then usually on the

[illegible]

[illegible]

[illegible]

The physical signs are also variable and it would be fair to say that the diagnosis can only be made with certainty on the X ray findings In our two cases involving the knee there was tenderness over the joint line in the position usually associated with damage to the internal semilunar cartilage This was most marked with the joint flexed to a right angle There was no limitation of movement but full flexion caused pain

[illegible] —Ly W [illegible] 22 This man gave a history that two years before [illegible] he had turned his right knee while playing football and that since [illegible] he had been [illegible] and that since [illegible] he has been troubled [illegible] knee of this he [illegible]

[illegible] the [illegible] restriction of the knee joint and a slight [illegible] the joint [illegible] Full flexion was not [illegible] Full flexion was [illegible] of flexion [illegible] the patient [illegible] this [illegible] [illegible] all loose bodies in the [illegible] joint and [illegible] portions of the inner

[illegible] through a vertical [illegible]. A flap of normal [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

These [illegible] illustrate [illegible] will be [illegible] observe [illegible]

It is [illegible] the correct treatment [illegible] area [illegible] may be [illegible] otherwise. The cartilaginous edge [illegible] doubtful if the underlying bone [illegible] obvious [illegible]. The little [illegible] become partially [illegible] pletely [illegible] proliferation [illegible] cartilage.

The prognosis of these is good in the [illegible] years after treatment [illegible] probable that the late results may not [illegible] owing to the [illegible] osteo-arthritis.

[illegible]

SLAVERY

[illegible] C. HOLMES MILLER

[illegible] —one [illegible] from [illegible] Slave [illegible] the West [illegible] As this [illegible] been [illegible] with [illegible] and [illegible] the reputation [illegible] go [illegible] the history [illegible] books of reference [illegible] from [illegible] and Winwood Reades [illegible] my companion— [illegible] Here it is for anyone [illegible] and who is interested

Slavery in the [illegible] is mankind. In every tribal [illegible] captors into [illegible] and prisoners and used them as [illegible] In [illegible] high civilization it gave leisure [illegible] and [illegible] and literature and science [illegible] slavery [illegible] economic life of every tribe state [illegible] and [illegible] all the primitive and later religions of mankind including Christianity. Incidentally the word slavery is derived from Slav or Slavonic the Slavs were Asiatic tribes—of whom the Russians Bulgarians Poles and Serbs are examples—who invaded Europe and were captured in wars with the Greeks and Romans.

In all recorded history the negro has always been a popular slave through [illegible] the countries of the Near Middle East and Eastern Europe. He had several attributes he looked peculiar and strange to his masters he was big and strong and a good worker he was docile in captivity and friendly and cheerful in adversity. The Arabs were some of the earliest slave traders and in due course the negro tribes of the West of Africa came to be looked upon as about the best raw material in the slave markets of the Middle East.

The fifteenth century was the golden age of European exploration. All

down the West [illegible] small [illegible] French, Portuguese, Spanish and English. [illegible] came the [illegible] rubber sailors [illegible] on the New World [illegible] their slaves [illegible] that the abor[illegible] Thus who kn[illegible] can aborigines and [illegible] transport slave labour to America. [illegible] by kidnapping the [illegible] along the West Africa [illegible] imposition to use the [illegible] came to be established [illegible] sale of the trade was [illegible] shipping companies [illegible] These companies had [illegible] on West [illegible] ports and the Americas [illegible] with friendly tribes [illegible] into the hinterland and [illegible] down to the settlements [illegible] ports were forts [illegible] were there sold to the agents [illegible] over with their [illegible] holds of the slave ships [illegible] the ship sailed for [illegible] the New World. [illegible] the cargo was [illegible] unfortunate wretches [illegible] is found [illegible] by judicious use of a whip [illegible] say many died on the voyage [illegible] their destination the slaves were herded into special [illegible] camps where they were [illegible] and trained [illegible] animals. [illegible] their time it was considered [illegible] the negro was looked upon as something [illegible] whose allotted fate in life was to do the [illegible] manual work.

By various wars [illegible] treaties and bargainings England [illegible] in the eighteenth century the [illegible] North America. [illegible] trouble arose between the Colonists and the home Government [illegible] question of taxation. Finally the Colonists rebelled against George III [illegible]

[illegible] in [illegible] after the successful War of Independence the U.S.A. [illegible] seceded. During the war and after the home Government as part [illegible] against the revolting States encouraged their negro slaves to [illegible] promising them freedom. The slaves who accepted this offer were [illegible] the maritime Canadian province of Nova Scotia (we shall have to [illegible] later as the story develops).

[illegible] Northern States of the New Union the industries were mainly [illegible] mining and manufacturing and in due course the labour for [illegible] derived from European emigrants. In the Southern States the [illegible] were connected with the sub-tropical culture of rice tobacco [illegible] and the labour was supplied exclusively by the negro [illegible] majority of the slave owners were undoubtedly humane and [illegible] kind masters but there were notorious exceptions and [illegible] horrors and atrocities began to percolate through the Northern [illegible] England—for the conditions in the British West Indies were [illegible] of the Southern States. Planters from the West Indies were [illegible] England on business on leave or in retirement and it was their [illegible] bring over with them their personal negro servants. When the [illegible] trade at first began to be stirred and anti-slavery societies formed [illegible] attempts to have slavery abolished were directed towards freeing [illegible] in England. There was a popular idea current that if a [illegible] proselyted as a Christian he could no longer be kept as a slave. [illegible] these negro servants were encouraged to run away from their [illegible] seek the first. The planters looked upon their slaves as part of [illegible] property legally bought and paid for and it was only natural [illegible] question the legality of the actions of the anti-slavery [illegible] Counsel's opinion was taken and the Attorney General and the [illegible] of the period both considered that baptism did not legally [illegible] that if a slave ran away from his master in England he could [illegible] and [illegible] to return. Consequent upon this there came a round [illegible] rulings slaves and distressing scenes were witnessed as [illegible] were driven through the streets of many cities. This more [illegible] also helped to awaken the general public to the situation and [illegible] inside and outside Parliament reopened the whole legal [illegible] A test case was brought before the courts and after prolonged [illegible] finally given in judgement that no negro could be detained [illegible] for a longer while in England. Following this decision many of [illegible] slave owners in England opened their doors and ejected [illegible] willy nilly out into the streets. The anti-slavery societies [illegible] made any provision for such an eventuality and the [illegible] were worse off than ever. They were homeless they had

[illegible] they had [illegible]. They became [illegible] churches and [illegible] scriptures [illegible] busybodies [illegible] them free. The [illegible] and the Government [illegible] completed [illegible] the purchase of [illegible]. [illegible] first batch of freed [illegible] were shipped [illegible]. Within [illegible]. In 1791 [illegible]. The freed slaves [illegible] in Nova Scotia [illegible] and their families [illegible] shipped off to Freetown.

The antislavery agitation continued to be fresh, and in 1807 a law was passed abolishing the slave trade [illegible] British Colonies. This did not mean that existing [illegible] the shipment of fresh supplies of slaves [illegible]. Naval patrols were established along the West African coast to capture ships and search for human contraband on its way across the Atlantic. Sierra Leone was made a Crown colony, and slaves rescued from captured "slavers" were landed there as free men. To this day every type of African origin and every dialect, it is said, can be seen and heard in Freetown. But the slave trade went on. The demand existed in the New World and it was financially worth while for adventurers to try and run the blockade. Frequently decoy ships were used, which were filled with old and decrepit negroes. While these were being rescued by the patrol vessels, fast ships containing lusty material ran the gauntlet.

In 1838 slavery was abolished in all British Possessions, and the slaves freed. The demand still existed in other countries, and so the African export trade continued. In the United States the difference in the labour conditions of the Northern and Southern States has already been referred to. In the original constitution of the United States there was a clause allowing for an imaginary line to be drawn from East to West. As the country was developed, States north of this line were to be non-slave, and those south of it were to be allowed to use slave labour. This was a compromise at the time, and it was hoped and expected that gradually the movement for the abolition of slavery would progress as it did in England. Paradoxically it was England that caused the slave question in the Southern States to return in all its former ugliness.

Lancashire had for centuries been a centre of spinning and weaving, and

[illegible] Mason Dixon [illegible] not accept [illegible] and there was [illegible] South [illegible] secede from [illegible] the Confederate States. Civil War [illegible] the North [illegible] United States. [illegible] North [illegible] States [illegible] North [illegible] States [illegible] North [illegible] and liberations. One has only [illegible] Wind [illegible] to realise that [illegible] between the slave [illegible] and free North States [illegible]

But [illegible] cost in this year of grace 1911. [illegible] it has not [illegible] even if it has [illegible] name. [illegible] slavery exists [illegible] British territory [illegible] Hong Kong. [illegible] the North [illegible] the [illegible] stream [illegible] slaves from Africa [illegible] Arab [illegible] the Sudan. Exposures of slave conditions have been made [illegible] South [illegible] —the first hinted at the local negro—and [illegible] the [illegible] Liberia. And when the history of [illegible] the [illegible] shall be the reader of posterity in the [illegible]

[illegible]

Clinical Notes and Cases

A CASE OF ATYPICAL LYMPHADENOMA

By [illegible] M.A., RUGGINN, M.A., B.[illegible] M.[illegible]
IN
R.N. Hospital [illegible]

[illegible]

[illegible]

[illegible] amount of brain later had [illegible] of his death.

[illegible] was tapped and [illegible] [illegible] 1940.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

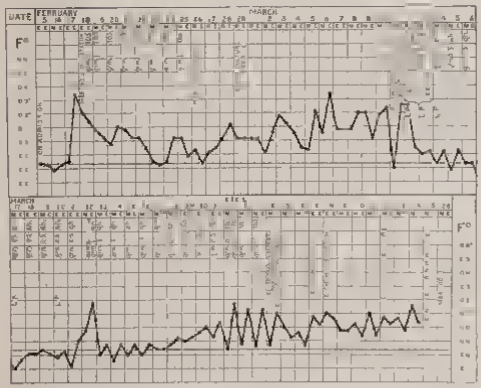
[illegible]

[illegible] AND [illegible] WITH [illegible]

By [illegible] HENRY [illegible] M.B. [illegible]
[illegible] Hospital

[illegible]

[illegible]


DATE
FEBRUARY
MARCH
F°
F°

[illegible]

55 [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] WELDON, M.D., [illegible]

[illegible]

[illegible]

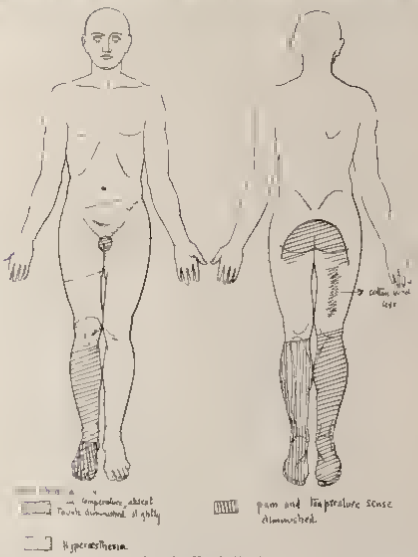
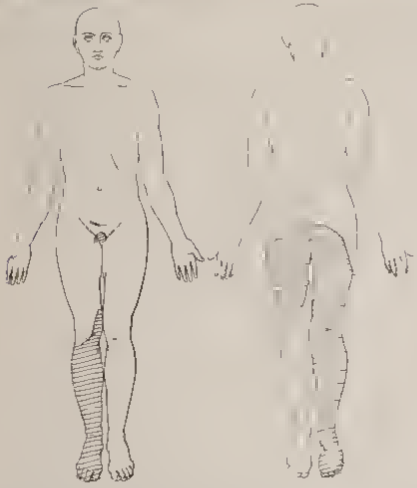


FIG. 1. March 22, 1940.

[illegible] through the sacral skin looks unhealthy [illegible] [illegible]
[illegible] M.R.P. negative
[illegible] Spine [illegible] normality



Other observations

Loss of all forms of sensation

FIG. 2.

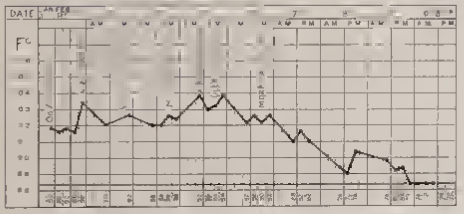
[illegible]

[illegible]

[illegible]

[illegible]

[illegible]


DATE
F°

[illegible]

[illegible]

A CASE OF THROMBOSIS OF THE LEFT SUBCLAVIAN ARTERY

By A[illegible] [illegible] ASTER [illegible] DAVID DOLLMAN [illegible]
R.N.V.H. Royal Naval College

[illegible]

[illegible]

[illegible]

Case Report

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

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Differential Diagnosis

[illegible]

[illegible]

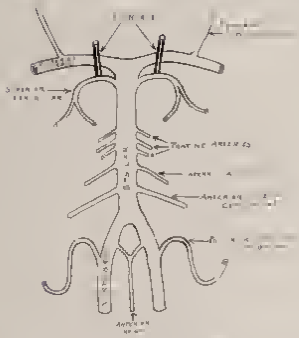


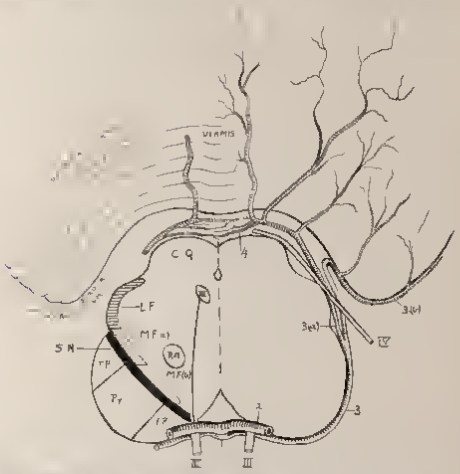
FIG. 1. [illegible]

II. Superior Cerebellar Artery

[illegible]

[illegible] superior surface [illegible] Lemoine.

[illegible]



[illegible] the superior cerebellar artery and its cross section of the Mid-Brain [illegible] (a) Lateral aspect. (b) Superior cerebellar artery (main trunk) [illegible] (medial branch). (c) Superior cerebellar artery (lateral branch). [illegible] III. Third nerve. IV. Fourth [illegible] RN. Red nucleus. PP. Pontomesencephalon fibres. PY. Pyramidal tract. S N. Substantia nigra. LF. Lateral fillet. MF (a). Medial fillet [illegible] MF (b). Remainder of medial fillet.

(2) The Syndrome of Occlusion of the Superior Cerebellar Artery.—The typical signs of lesion of the superior cerebellar artery are: (a) Signs of cerebellar deficiency on the side of the lesion. (b) Ataxic movements on that side. (c) Loss of [illegible] and pain and tactile sensation on the side opposite the lesion.

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[1] Giglioli, C. M. M. J. [illegible] Pal Nava M. [illegible] 2[illegible]

[2] Critchley, M., Rinton [illegible] The Myel[illegible] their Clinical Significance [illegible] College of Sur[illegible]

[3] Davison, C., Goldhart, S. [illegible] and Sivitsky, N. [illegible] *Psychiatry* **33**, 1143 1936

[4] Critchley, M. and Schuster, [illegible] 144 1933

[illegible]TITIC HYDROCEPHALUS

By [illegible] ARTHUR CRAIG, M.B., R.N.

[illegible] H.M.S. [illegible] was admitted to R.N. Hospital [illegible] with pus [illegible] left [illegible] was performed and pus was found in the [illegible] The lateral sinus [illegible] of the lateral sinus and middle fossa [illegible] exposed. No complications [illegible]

[illegible] and some tenderness [illegible] left [illegible] appeared to [illegible] temperature [illegible]

[illegible]

[illegible]

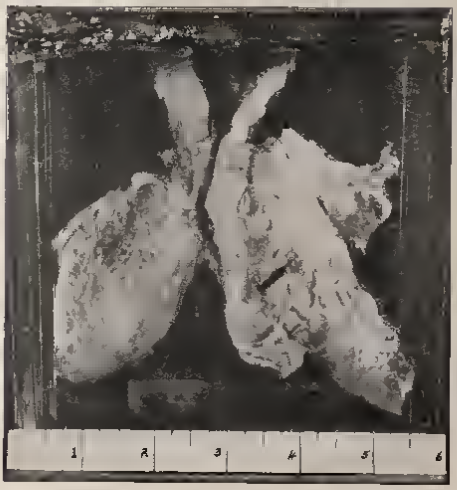
[illegible]

[illegible] THYMIC DEATH

[illegible]

[illegible] FROGGATT [illegible]
[illegible] *Wales*

[illegible]


1
2
3
4
5
6

[illegible]

[illegible]

[illegible]

[illegible]ISM COMPLICATING MASTOIDITIS

By [illegible] MAJOR ARTHUR CRAIG, M.B., R.N.

[illegible] was admitted to R.N. Hospital [illegible] for bilateral paracentesis (tympanic) and [illegible] mastoid (left) and [illegible] organisms and had been treated [illegible] the left auxiliary sinus [illegible] the hemolytic streptococ[illegible] mastoid and repeated [illegible] the left auxiliary sinus [illegible] Entered 10 when he had [illegible] was 14,200 per [illegible] performed. The [illegible] was extensively [illegible] and along the [illegible] considered [illegible] the sinus [illegible]

[illegible] was 10,16[illegible] [illegible] complete [illegible] the [illegible] of the left [illegible]

[illegible] slightly irritable [illegible] relapsed [illegible] 600 [illegible] 100 [illegible] urine + [illegible] 112

[illegible] 14 per minute [illegible] abdominal pain [illegible] of the [illegible] Sinus [illegible] 21

[illegible] infiltration [illegible] the [illegible] Sinus [illegible] was [illegible] fluid [illegible] the [illegible]

[illegible] 110 [illegible]

[illegible]

A CASE OF [illegible] IN THE [illegible]

By S[illegible]

[illegible]

[illegible]

[illegible] SYPHILIS

[illegible] B. BURISON, M.B., [illegible]

[illegible]

UNILATERAL SYNKINESIS

By [illegible] PRESSLEY R. VAUGHAN [illegible]

[illegible]

[illegible]

THE USE OF ALTERNATIVE SENTENCES IN SEMANTOGRAMS

By [illegible] HERBERT BAGGELEY [illegible]

[illegible]

Correspondence.

SPINAL ANALGESIA

[illegible] JOURNAL OF THE [illegible]

[illegible]

[illegible]

[

[illegible]

[illegible]

[illegible] cord lesion—bl[illegible] [illegible] the rules and using [illegible] [illegible] was available [illegible] [illegible] the space between the second [illegible] [illegible] with comparative [illegible] transfix the cord [illegible] has been evolved that will [illegible] their incidence and severity [illegible] the rules which I have [illegible] (2) [illegible] injection [illegible] the cells is blind stimulation [illegible] [illegible] 500 [illegible] but indubitably the [illegible] [illegible] them second [illegible] [illegible] experience of spinal [illegible] the pleasure of Sing[illegible] [illegible] the [illegible] [illegible] I know that [illegible] [illegible] and all related world [illegible] immense [illegible] [illegible] personal [illegible] I shall [illegible] [illegible] [illegible] [illegible]

[illegible]

[illegible] IN LYMPHOGRANULOMA INGUINALE

[illegible]

[illegible]

[illegible]

Reviews.

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

I. I. B.

[illegible] HANDFIELD-JONES, [illegible] M.S., F.R.C.S. [illegible] Out-Patients, [illegible] Florence Nightingale Hospital [illegible] Hospital for Women, Soho Square [illegible] 110 [illegible] 91 [illegible] including [illegible] E. & S. Livingstone Limited.

[illegible] book [illegible] Students at St. Mary's Hospital [illegible] has been [illegible] but even [illegible] attention [illegible] infection which [illegible] of [illegible] full function [illegible] The [illegible] of the book [illegible] couched in simple [illegible] The chapter on [illegible] laid on the dangers of [illegible] The inclusion of [illegible] Henry's approach [illegible] appropriate. It avoids [illegible] the natural recumbent position

Further [illegible] will however [illegible] a chapter on [illegible] individual [illegible] and physiol[illegible] injuries of the hand [illegible] and tumours Both [illegible] detailed references [illegible] type and the illustrations [illegible] such [illegible] permit [illegible] and [illegible]

[illegible] F B

A [illegible] D M R [illegible] 1910 [illegible]

[illegible]

[illegible] for [illegible] of [illegible] [illegible] of the [illegible] [illegible] English [illegible] not [illegible] [illegible] opportu[illegible]

[illegible] A [illegible]

THE ANATOMY OF THE EYE AND ORB[illegible] W [illegible] M B B S [illegible] F R C S (Eng) Ophthalmic Su[illegible] Royal N[illegible] Hospital [illegible] Surgeon Pathologist and Lecturer [illegible] the Royal W[illegible] Ophthalmic Hospital Second Edition [illegible] Pp [illegible] illustrations including five in [illegible] H K Lewis & Co [illegible] Price 31s 6d

This is an original and highly p[illegible] embracing the [illegible] the structure development and comparative anatomy of the visual organ It is based mainly on the author's [illegible] demonstrations to [illegible] number of years The book is also [illegible] well printed [illegible] paper It is very difficult in a short p[illegible] to [illegible] and unique work on the subject [illegible] excellence of the illustrations many of [illegible] microscopical sections prepared by the author [illegible] sixty more illustrations than the first edition [illegible] an excellent series of flat sections of the retina which [illegible] assistance in the understanding of the difficult membranes [illegible] with a comprehensive bibliography The book finishes with a [illegible] chapter on comparative anatomy

Mr Wolff's reputation as a [illegible] well known, and this book will [illegible] be very widely read so that those who have not had the honour and [illegible] fortune to attend his lectures and demonstrations may reap the benefit of his industry and erudition

[illegible] D [illegible]

[illegible] Edited by [illegible] F R C S Eng [illegible] Hospital &c [illegible] Fifth Edition fully revised [illegible] and 182 illustrations Bristol John Wright [illegible]

[illegible] the first edition of this book was [illegible] popular is over and the demand [illegible] This reason for this is not far to seek [illegible] supplies just the information [illegible] The text [illegible] The present [illegible] with the addition of new [illegible] and appliances [illegible] The number of pages [illegible] is 120

[illegible] to be congratulated on the production [illegible] on the essentials [illegible] Mr W [illegible] Pye and thumb nail sketch of his [illegible] on H F B

ORGANIZATION AND TACTICS OF THE ARMY MEDICAL SERVICES IN WAR. By [illegible] Nicholls M B Ch B Royal Army Medical Corps (ret) Second Edition 1919 Pp xvi + 496 Baillière Tindall & Cox 7 & 8 Henrietta Street London W C 2 Price 15s

No book on the scope of this present publication exists in any language It was written primarily to fill a want for such a book by officers in order to understand the position of the Medical Services in the Field and to prepare for their Promotion examinations The author is well equipped for the task owing to his wide experience gained on the Western Front during the Great War and the fact that he has examined every kind of unit in the Field on active service The work is divided in four sections Part I General Organization and Administration Part II Medical Units their Composition Organization and Administration Part III Medical Tactics and Strategy Part IV A selection of Stories and problems to illustrate the above

In the present edition there are entirely new sections have been added Firstly a chapter on the transport Casualties by air by Air Commodore A S Glynn R A F P M O Egypt Command R A F The second a chapter on the Medical Service of an Anti Aircraft Division by Colonel A R Lawrie A D M S 2nd Anti Aircraft Division and the third an account of the Emergency Medical Service of the Ministry of Health by Colonel F G Lesher a Group Officer E M S

This book though primarily written for officers of the R A M C contains much which is of value and interest to Naval Medical Officers The duties of the latter are by no means confined to matters pertaining to ships particularly in war time A knowledge therefore of the conduct and organization of personnel equipment and transport &c is of vital importance to officers landed with isolated units or acting in close co operation with Military Medical Services The chapters on aviation only a few on Calculation of Casualties Evacuation Transport Quantities and Supplies of Medical Stores and the organization of Dressing Stations Casualty Clearing Stations and Base Hospitals are particularly valuable

The author is to be congratulated on the manner in which he has presented a difficult subject with brevity and clarity The labour in compiling it must have been arduous Further editions are assured H F B

[illegible] By W. Clunie Harvey, M.D., D.P.H., M.R.San.I., and Harry Hill, M.R.San.I. 1940. Pp. [illegible] Illustrations. London: H. K. Lewis & Co. Ltd. Price 10s. 6d. net.

[illegible] with [illegible] children and troop [illegible] parasitic disease.

[illegible] although [illegible] ingredients [illegible] of [illegible] with [illegible] present [illegible]

[illegible] and [illegible] illustrated [illegible] leaflets [illegible] the [illegible]

In a handbook of [illegible] unavoidable but the method [illegible] be improved. In effect [illegible] only [illegible] covered in a small volume and [illegible] aspect of the [illegible] pests has been omitted.

J. S. [illegible]

Rose and Carless' Manual of Surgery. Edited by C. P. G. Wakeley, D.Sc., F.R.C.S., F.R.S.E., &c., Temporary Surgeon Rear-Admiral R.N., Senior Surgeon King's College Hospital, Director of Surgical Studies and Lecturer in Surgery, King's College Hospital Medical School, &c., and J. B. Hunter, M.C., M.Chir.Cantab., F.R.C.S., Surgeon King's College Hospital, Lecturer in Surgery, King's College Hospital, &c. Sixteenth Edition. [illegible] vols. July 1940. Pp. xii + [illegible] colour plates, 1,090 illustrations. London: Baillière, Tindall & Cox. [illegible]

This familiar textbook appears [illegible] edition just [illegible] after the first. It is world famous and its popularity [illegible] questionable whether any other manual [illegible] at present existing [illegible] so widely read. Three years ago the book was published in two volumes for the first time in its history as the [illegible] Edition [illegible] The old one-volume edition was very heavy to handle and the letterpress tended to be cramped. In its present form [illegible] giving us two easily readable [illegible] both the Editors and the Publishers. [illegible] been carried out. The first eight chapters [illegible] have those on Haemorrhage and Shock and on [illegible] and [illegible] been added in connection with [illegible] and Surgery of the Central Nervous System [illegible] parts of the book extra pages have been [illegible] by ninety. [illegible] new illustrations and three new coloured plates have been added [illegible] Gas Gangrene, Angioma of the Brain, and on [illegible] A special chapter has been written on War Surgery for the purpose of giving

[illegible] members of the [illegible] Fighting [illegible] their [illegible] requirements, [illegible] did [illegible] We extend thanks to the [illegible] which they have carried [illegible]

H F B

News of the Service.

ADMIRALTY ORDERS

*2219.—Gilbert Blane Medal 1940—Award

(M D G 15860/39 —20 6 1940)

[illegible] Blane Medal for the year 1940 has been awarded to Surgeon Commander P K Fraser M D, Ch B R N

2236 —Sick Berth Ratings—Examination fee State Registration

(M D G 8479/40 —20 6 1940)

With reference to the arrangements whereby Sick Berth Ratings are admitted to the [illegible] of the General Nursing Council for England and Wales on production of [illegible] an Form S 1246L the Council have agreed to continue this procedure in [illegible] provided that all the subjects contained in the Syllabus laid down by the [illegible] have been covered and that the time spent in nursing duties in the Naval Service is not less than three years

2248 —Notification of Army Personnel Admitted to R N Hospitals as Sick Quarters.

(M D G 17976/40 20 6 1940)

Every sick or wounded officer nurse or soldier admitted, should within 24 hours or as soon as is possible after be notified to the Army authorities by post as follows —

For officers and nurses

Original to War Office (for Personnel Branch)

Duplicate to War Office Casualty Section

For other ranks

Original to Officers in Charge Records of the unit concerned

The following information should be given

Personal No (officers)

Army No (other ranks)

Rank and name

Unit

Theatre of war or station abroad from which arriving or home station at which arriving

Date of admission

Name of hospital etc

Disability

Date

Officer stamp of hospital

2249 —Simple Method for the Administration of Oxygen to Patients in a Gas contaminated Atmosphere

(M D C 17966/40 20 6 1940)

A simple improvised method has been devised and tested by the R A F

The apparatus required is an oxygen cylinder with fine adjustment valve an oxygen [illegible] rubber tubing a wide bore transfusion needle and the standard service anti gas respirator

The respirator is worn in the normal manner

The transfusion needle is inserted through the corrugated tubing of the respirator at the [illegible] tab where it can be fixed by thread or tape

[illegible]

[illegible]

[illegible]

2250.—Ear Protection during Air Raids

(M. 011279/40.—20.6.1940.)

The following note has been prepared by the Air Staff on the subject of [illegible] caused by air raids.—

Experience has shown that during air raids the noise made by [illegible] bombs—both as regards intensity of [illegible] and also explosions. Material evidence is accumulating that the [illegible] has said that certain aspects of German bombs are designed to [illegible] with the object of enhancing the moral effect of their attacks.

2. It is an established fact that such noises reach us [illegible] and lead to a deterioration of morale, particularly a success on a [illegible] short air raids. It is therefore most important that civilians should be [illegible] that they should take steps to protect their ears against it.

3. The best method of achieving such protection is cotton [illegible] holes with a softened beeswax material such as "Beales Q[illegible]" [illegible] farmers preparation sold in boxes of 10 by chemists. [illegible] soft by kneading them with the fingers and then moulding them [illegible] ear hole. Another method of protection against noise [illegible] or chewing earplugs such as the Mallock Armstrong earplugs.

4. The simplest form of home made ear protectors are [illegible] with vaseline. These should be large enough to fill the ear hole and [illegible] at the outer end for ease of removal. Tins can conveniently be [illegible] containing matchboxes or small cardboard boxes such as jewellers [illegible] even better plugs can be made by beeswax or plasticine wrapped [illegible] of such lonely ear plugs carried by individuals should be kept [illegible] conditions and should be run well home into the ear as required [illegible] bore mud.

2301.—Form M 145—Abolition

(Sta. 10127/40.—20.6.1940.)

The following has been abolished and no stocks become [illegible] prepared locally in the Royal Marine establishments as regards [illegible]

M 145. List of men revoked from Royal Marine Division as with [illegible] years of entry.

2317.—Personnel Engaged in Medical Services in War—Protection under 1929 Geneva Convention

(N. 8295/39.—27.6.1940.)

Attention is drawn to the fact that in accordance with the provisions of the International Convention concluded at Geneva on July 1929 personnel engaged on sick exclusively in the collection, transport and treatment of the wounded and sick and in the administration of medical formations and establishments and chaplains should wear armlets with the Red Cross on a white ground and be provided with identity certificates.

2. Identity Certificates (Naval Form M 190, Army Form W 3051, R.A.F. Form F 1189) and armlets will therefore require to be issued to Sick Berth ratings as well as to Naval Medical Officers, members of the Naval Nursing Services and Chaplains who are employed ashore.

3. Similarly other classes of civilian personnel such as pharmacists, hospitals [illegible] clerks, ambulance drivers and other civilian wages staff who are employed in R.N. Hospitals etc. are entitled to protection under the 1929 Convention. The civilians are to be supplied with certificates of identity or Naval Form M 192 (Army Form W 1051, R.A.F. Form 2192) and armlets (with the Red Cross on a white ground).

4. Identity Certificates and armlets to accordance with the longer form arrangements will be issued and stamped and the Certificates signed by the Senior Naval Officer [illegible] at a R.N. Hospital the Medical Officer in charge [illegible] for the members of the Voluntary Aid Detachments will be issued and signed by the competent military authority as appointed by the War Office.

5. Naval ratings and Royal Marines when detailed as stretcher bearers with landing parties detached from H.M. ships will wear on the left arm an armlet of white cloth

[illegible]

[illegible] Royal Naval Reserve, Royal Marines Reserve, Bath Red Cross, SJB [illegible] Paymaster Lieutenant Clothing [illegible] reported [illegible] possible

[illegible] how to keep a register of certificates issued

2360.—Civil Hospitals included in the Emergency Hospitals Scheme—Treatment therein of Naval and Marine Personnel

(C.W. 12507/40.—27.6.1940.)

It is notified for general information and guidance that under naval regulations all Naval Lists officers of the Royal Navy and Royal Marines (including those granted temporary commissions) and officers of the Retired, Reserve and Emergency Lists called up for service, all ratings of the Royal Navy and Royal Marines, the Mobilised Reserves, Shore Signal and Wireless Services, Pensioners, Recruiters and Royal Marine Police, also officers and ratings of the Women's Royal Naval Service (W.R.N.S.) and members of The Voluntary Aid Detachment (V.A.D.) are normally eligible for free maintenance and treatment in recognised Service Hospitals. In the case of ratings, where rates of pay [illegible] provision allowances, *e.g.* Shore Signal Service, Pensioners, Recruiters, deductions from pay are made for subsistence while in hospital. When officers and ratings [illegible] are discharged to naval hospitals which are authorised [illegible] Ministry of Health Emergency Hospitals Scheme they will be eligible equally for free [illegible] and treatment therein at the public expense.

2413.—First-aid Outfits for Aircraft

(M.D.C. 8561/40.—27.6.1940.)

It is desired to ensure that all new aircraft are provided with First Aid Outfits, stocks of [illegible] to be held at R.N. Air Stations and officers responsible for equipping aircraft [illegible] original equipment are to demand outfits from the Medical Officer of the station. If H.M. ships carrying aircraft are to stock and maintain an allowance of 10 [illegible] First Aid Outfits as spares, which should be demanded from the medical establishment [illegible] which medical stores are usually obtained.

When aircraft are stripped down for overhaul these outfits, which contain drugs and dressings, and the Dangerous Drugs Act are to be kept locked up in the charge of a [illegible]

2469.—T.124 (c.), Personnel—Medical Examination and Standard of Fitness

(M.D.G. 21256/40.—4.7.1940.)

The medical and physical standard required for an Officer or Rating engaged under T.124 Agreement and variants is that:—

(1) He is free from any evidence of disease of brain, nose, throat, heart, lungs and abdominal organs.

(2) His hearing is good and he has no discharge from the ears.

(3) His teeth and gums are in such a condition that no detriment to his health results from their condition and they are sufficient for mastication.

(4) He has no hernia and is free from haemorrhoids.

(5) He has no disease of skin and is free from any sign of active syphilis or other venereal disease.

(6) He has not suffered from enuresis or incontinence of urine.

[illegible] of less than 6/18 in each [illegible] for Decl[illegible] [illegible] and eyesight repaired [illegible]

[illegible] grounds of reason to Oth[illegible] [illegible] the Royal Navy [illegible] [illegible] further course is not [illegible] [illegible] and the Board of [illegible]

[illegible] Naval [illegible]

[illegible]

[illegible] Service [illegible] [illegible] Service [illegible] [illegible] whether previously insured or not, Nil contributions are payable by the woman and no deduction from pay or otherwise necessary.

(*b*) *Pension Insurance*.—Personnel will be treated in the same way as Nurses serving on a normal engagement in regard to health insurance cards will not be stamped, a contribution at a special women's rate of 24*d* being paid direct to the Ministry of Health by the Admiralty in respect of each woman whether previously insured or not, Nil contributions are payable by the woman and no deduction from pay or otherwise necessary.

(*b*) *Pension Insurance*.—Personnel will be treated in the same way as Nurses serving on a normal engagement in regard to cards will not be stamped, a contribution at the women's rate of 54*d* a week for each week of service being paid direct to the Ministry of Health by the Admiralty in respect of each woman whether previously insured or not, of which one of 9*d* will be regarded as pay 3*d* a week. From 1st July, 1940 the rate of contribution will be increased to 8½*d* a week of which one of 9*d* a week will be regarded as pay 3*d* a week. Deductions from the pay of the woman in respect of these contributions are to be brought in as an income under the heading of Ministry of Health Pensions Insurance.—Alternative forms QARNNS/K.

(*c*) The necessary Form NS 124 (Health) Form S 1061 (W) for (*a*) and (*b*) above will be prepared immediately and forwarded to the Ministry of Health, Blackpool by the Officer-in-Charge in each country, which has previously insured, or not. When a woman possesses a valid insurance card this will be retained and in the case of Form NS 124 by the event of a woman being subsequently transferred to another establishment where a check on record of contributions to Health Form NS 124 will be required.

(*d*) On the final discharge of a woman from the service Form S 1061(W) is to be completed.

(*e*) *Unemployment Insurance*.—Personnel of QARNNS Reserve will be exempted from the provisions of the Unemployment Insurance Act. No contributions shall be paid on their behalf.

This Order will be effective from the 1st September, 1939, but deductions from pay in respect of the insurance contributions referred to in paragraph 1 (*b*) above will be made the date of the coming of this Order, so that no arrears of contributions from the commencement date. A pamphlet will be issued to every stating the date on which the first deduction from pay will be made and there insurances.

[illegible] Scale of Medicines [illegible] Ships Afloat—Additions

(M D [illegible])

[illegible] additional Medical S[illegible] by H M Ships [illegible] been accorded [illegible]

		Large	Small	Single	Vo
		[illegible]	[illegible]	No 2	[illegible]
[illegible]	N			—	
[illegible]	No			—	
[illegible]	Pi				
[illegible] Vi[illegible]	Pis				
[illegible]	No				
[illegible]	No				
[illegible]					
[illegible]	No				
[illegible]	No				
Spi[illegible]	Ydc	[illegible]	[illegible]	[illegible]	[illegible]
Dent[illegible]	oz	[illegible]	[illegible]	[illegible]	[illegible]
Med[illegible]					
[illegible]	z	8	8	[illegible]	
[illegible]	lb	[illegible]			[illegible]
M & B [illegible]	No	20[illegible]	[illegible]	[illegible]	20
M & B [illegible]	No	[illegible]	[illegible]	[illegible]	[illegible]
B[illegible]	lb	2	[illegible]	[illegible]	[illegible]
Sulphonamide [illegible]	No	1 000	500	[illegible]	[illegible]

Medical Officers [illegible] in their approval [illegible] mentioned articles [illegible] that deli[illegible] certain items of [illegible] in obtaining deliv[illegible] be noted that [illegible] is to be [illegible] supply Alcohol

* Stocks on So[illegible] should have [illegible] Medical Offic[illegible] and [illegible]

The follo[illegible] are to be [illegible]

Tann[illegible] (for [illegible])				
Mi[illegible] Pectoral [illegible] (Co[illegible])	oz	[illegible]	[illegible]	[illegible]
[illegible] Bism[illegible] Co (Maclean's powder)	oz	[illegible]	[illegible]	[illegible]

2549.—Treatment of Phosphorus Contaminated Wounds

(M D G/N O 6586/40—11 7 1940)

[illegible]tion of Medical Officers is directed to the treatment of wounds [illegible] with phosphorus from bullets bombs and shells as contained in paragraph [illegible] Medical Manual of Chemical Warfare In accordance with A F O 9081 10 [illegible] should be obtained by all Medical Officers without delay

(A F O 9081/10)

2550.—Protection from Burns

(T S D/M D G 17391/40—11 7 1940)

[illegible] of severe burns to exposed or semi-exposed parts of the body *e g* [illegible] and lower leg have recently occurred

All [illegible] should have issued to the personal charge of officers and men one anti [illegible] and one pair of gloves (S R 95 page 140) The lower leg can be protected [illegible] of trousers inside the socks

[illegible] drawn to the necessity for carrying the helmet and gloves [illegible] (S R 95 page 141)

[illegible] for self protection in action against burns is to be impressed on all [illegible]

2[illegible]—Voluntary Aid Detachments—Dental [illegible]

(C.L. 3/27/40.—11/7/1940.)

Sta[illegible] and members of the VADs are eligible [illegible] at the public [illegible] under the usual conditions as to Medical [illegible] of hospitals.

2. D[illegible] be supplied [illegible] or responsible [illegible] following [illegible]

Of[illegible]

[illegible]

[illegible] to the Sta[illegible]

[illegible] through the public [illegible] own funds.

2628.—B.R. 109—Memorandum on Use of Sulphonamide Derivatives—[illegible] Medical Officers.

(M.D.G. 183885/40.—11/7/1940.)

A copy of the Memorandum concerning the [illegible] of sulphonamide derivatives supplied to rank Medical Officers. The number B.R. 109 has been allotted [illegible] pamphlet.

2. The Memorandum deals with the medical sulphonamide derivatives in the [illegible] and treatment of wound infections and other infections amenable to [illegible].

3. Copies will be supplied to ships and establishments [illegible] as demands needed [illegible] Naval State Officer, Royal Victoria Yard, Deptford, S.E.8.

2666.—Sick Berth Branch—Institution of Ratings of Dental Surgery Attendant and Dental Mechanic.

(N.1695/40.—18/7/1940.)

It has been decided to establish within the Sick Berth Branch for the period of hostilities two new distinct classes of ratings for duty with dental officers, viz.—Dental surgery attendant and dental mechanics. These will be designated S.B.A.(D) and S.B.A.(D.M.) respectively and they will be kept on separate rosters from other sick berth ratings for all purposes, but will not be available for general sick berth duties.

ENTRY AND TRAINING.

1. *Dental Surgery Attendants.*—S.B.As (D) will be recruited primarily from R.N.A.S.B. instructors and sick berth ratings (H.O.) already trained in dental duties and possessing dental experience if available, but normally from H.O. ratings trained and trained specially for dental duties. Men having the special knowledge required for entry to Dental Clinics should be in the Annual Air Force (*vide* schedule of [illegible] and equipment and training (including appliances) of [illegible] dental operations issued to units as S.B.As will be eligible. They will be trained as S.B.As (D) and advancement to the rating of L.-[illegible], Sick Berth Attendant, on appointment. [illegible] will be the normal form of [illegible] sick berth ratings (*vide* AFO 400/40).

[illegible] appointed at upwards of 900 *ft* the training will normally be completed. Arrangements will be made for an intake of approximately [illegible] per month in H.M.S. *Royal Hospital* (*Haslar*) and will be divided equally between the three home points for the specialized training. After the usual [illegible] disciplinary course (not for S.B.As generally) these ratings will be [illegible] to the three home points for the special instruction of the Dental Officers. This course will include (*a*) [illegible] and practical instruction by Dental Officers in the various duties that fall to Dental Surgery Attendants, (*b*) a series of eight lectures and demonstrations on First Aid, rank of [illegible] by the Principal Medical Officer and (*c*) [illegible].

As S.B.As (D) [illegible] depots will draft them as [illegible] for general service. Sick berth ratings now employed on dental duties will be left unchanged in dental duties.

II. *Dental Mechanics.*—A [illegible] of experienced dental mechanics are required for service in H.M. Ships and establishments that may be [illegible] draft when required, and at the same time provide some held in shore employment. It has been decided that the three H.O. training establishments (H.M. Ships *Royal Arthur*, *Collingwood* and *Raleigh*) shall also be manned by [illegible] dental mechanics. All authorised dental mechanics now employed are invited to apply

[illegible] channels for transfer to naval [illegible]
[illegible] within mechanics at one of the [illegible]
[illegible] thing or are not selected for [illegible]
[illegible] the existing conditions and will be [illegible]
[illegible] of hand is required
[illegible] ratings in persons serving in the R N A S B R [illegible]
[illegible] available are also eligible to apply [illegible]
[illegible] to the navy branch, any such [illegible]
[illegible] of their experience as dental [illegible]
[illegible] the officer
S N A [illegible] [illegible] will be [illegible]
[illegible] as for S B A generally) [illegible]
[illegible] as laid down for S B A s (D [illegible]
[illegible] dental duties
[illegible] transfer to naval status will [illegible]
S B A [illegible] laid up to S B P O (D M) Other [illegible]
[illegible] administration
[illegible] Dental Surgeon Attendants and Dental Mechanics will [illegible]
[illegible] Sick Berth Branch

2673.—Hurt Certificates—R M Extraneous Units on Shore

(A G R M 4914/40 18 7 1940)

With reference to A F O 3687/39 Hurt Certificates are not to be granted to Royal Marine other ranks wounded or injured by enemy action while serving ashore in extraneous Royal Marine units Separate instructions have been issued by the Adjutant General Royal Marines

2 Hurt Certificates are to be granted under the normal regulations for other injuries incurred on duty

3 Royal Marine Officers are to be granted Hurt Certificates at the first convenient opportunity

2759 —Naval and Marine Officers Dangerously Ill in Hospital—Visits by Relatives

(C W 21328/40—25 7 1940)

With reference to A F O 2205/37 paragraph 224 it is notified that third class railway warrants may be issued to persons visiting serving Officers lying dangerously ill in hospital when the cost of the journey would lead to financial hardship The number of visitors in each case will be limited to two of whom one must be a relative The conditions for notifying next of kin and for issuing railway warrants will be the same as laid down in A F O 2205/37 paragraph 224 with regard to men

This concession is applicable irrespective of the cause of the Officer s disability

2775 —R N A S B R Ratings—Advancement

(N 10809/40 —25 7 1940)

Some permanent advancements of R N A S B R ratings who were qualified under R N A S B R regulations prior to the outbreak of war have recently been approved to fill vacancies in the authorised establishment

2 The establishment is now complete and no further permanent advancements of R N A S B R ratings will be made during the war Future vacancies arising in the permanent R N A S B R establishment will be left unfilled until after the conclusion of hostilities

3 All future advancements during the war of R N A S B R ratings will be temporary advancements made in accordance with A F O 400/40 Ratings must qualify both professionally and by service by R N standards Previous service in the R N, other than training time will count towards the service qualification

4 In consequence of the above A F O 400/40 is to be amended as follows —

paragraph 2(a) second clause—*delete* reference to R N A S B R
paragraph 15—cancelled

2847.—Form M 55—Abolition

(Sta 10188/40—25 7 1940)

Form M 55—Quarterly Accounts of Dispensary Glycerines Wines etc has been withdrawn and removed from the Standard List of Medical Forms M 1

Established units formerly using this form are to account for the stores mentioned in the Medicine Stores Accounts

30[illegible]—[illegible] Registered Male Nurses—[illegible] as S.B.A. (H.O.)

(N/M.D. [illegible])

W[illegible] A.F.O. 3011/39 [illegible] R[illegible] Male Nurses not already hold[illegible] [illegible] probationary [illegible] R.N. [illegible] as early as possible [illegible] in the [illegible] hospital in the [illegible] H.O.)

[illegible]81.—Forms M.135, 136 and 138—Abolition

(Sta. 10115 [illegible] 8.1.1940.)

[illegible] cards M.135, M.136 and M.138 will not be reprinted [illegible] [illegible] the white card M.134, is to be used in their [illegible] [illegible] colouring the corners of the cards with pencil or ink.

3118.—Kits of Ratings Transferred to Hospital

(N. 12818/40.—15.8.1940.)

Owing to the numerous cases occurring of Kits being lost or mislaid on transfer [illegible] from ships and shore establishments to Naval Hospitals and Hospital Ship[illegible] [illegible] of all concerned is directed to the provisions of King's Regulations and Admiralty Instructions, Article 1516, clause 3, and to Instructions for Naval Hospitals, Article 1[illegible]

3162.—Medical History Sheets

(M.D.C. 26397/40.—15.8.1940.)

The medical records of men entered on continuous service [illegible] [illegible] special service engagement should continue to be kept on Form S.146 and [illegible] Envelope Form S.446(A). For these men Form B.216, "Certificate of [illegible] Medical Examination," [illegible] to be rendered as usual.

2. The medical records of men examined by the Civilian Medical Boards [illegible] the Ministry of Labour and National Service are entered upon Form N.S. (M.C.) 14 "Medical Examination Record and Medical History Sheet." For [illegible] Form N.S. (M.C.) 14 is to be used in place of Form S.446 and [illegible] Form [illegible] [illegible] to be placed in Envelope Form S.146(A).

[illegible] The medical examination by the Civilian Medical Boards [illegible] [illegible] examination for all men entered as volunteers or under the National Service (Armed Forces) Act for service until the end of the period of the present emergency.

[illegible] On reprint Form N.S. (M.C.) 14 will be allotted new numbers, viz.:—

Naval Form	B.215
R.A.F. Form	3[illegible]A
Army Form	B.178A
N.S. (M.C.)	14

and will be in use as a Medical History Sheet in all three Services.

3164.—Form M.115—Abolition

(S[illegible] 10221/40.—15.8.1940.)

The following has been abolished, and form M.117, Account of Stores [illegible] [illegible] [illegible]:—

Form M.115—Account of the Receipt of Chemicals.

3181.—Medical Officers, R.N., for Short Service—Transfer to Permanent [illegible]

(C.W. 25780/40.—22.8.1940.)

As soon as possible after 1st January, 1941, Surgeon Lieutenants, R.N., for Short Service of 1937 seniority, and also officers of 1936 seniority who [illegible] [illegible] [illegible] applications should report through the usual channels whether or not they wish [illegible] considered for transfer to the permanent list. Applications for transfer will be considered [illegible] about March [illegible] and the selections made will be promulgated in due course.

2. The recommendation of the Commanding Officer should accompany each application.

3. Should an officer wish to defer his decision, the fact should be reported [illegible] [illegible] subsequent application for transfer would be considered when the [illegible] [illegible] made.

3197.—Sick Leave—Issue of Free Travelling Warrants

(N 12612/40—22 8 1940)

[illegible] Travelling Warrants [illegible] issued under the general conditions [illegible] A F O 8 7/40 [illegible] the rank of Officer when they are [illegible] convalescent leave on [illegible] from hospital

(*A F O 87/40*)

3201.—Medical Examination by a Surgeon and Agent

(N 11921/40—22 8 1940)

[illegible] engaging without a break in service may be medically examined by [illegible] Surgeon and Agent when no Naval medical officer is available but [illegible] considerable time and expense in travelling would otherwise be occasioned [illegible] of Admiralty approval for this examination will not be required during [illegible] in emergency

(*A R & A I Article 3 9 1a*)

3205.—Spectacles—Supply to Naval Ratings

(M D G 28275/40—22 8 1940)

[illegible] procedure for the supply of spectacles to ratings appears not to be fully understood [illegible] claims have been received for payment for glasses ordered by ratings [illegible] in fact they are not entitled to wear glasses

[illegible] Fleet Orders 1824/38 1838/39 and 2890/40 should be studied [illegible] the source of supply for spectacles —

(1) Ministry of Pensions Optical Appliance Depot Brent and Acton [illegible] through a naval ophthalmic specialist

(2) Local purchase from a qualified optician

[illegible] supply [illegible] through the Optical Appliance Depot Acton it is essential [illegible] should be made in the Medical Department by the *Naval Ophthalmic* [illegible] and aids specially provided of which supplies have already been [illegible] Home establishment Further supplies of these [illegible] the Medical Department Admiralty

[illegible] who [illegible] spectacles are obtained locally through an optician should [illegible] bill from a firm and an agreement with the National Ophthalmic [illegible] (National Eye Service) The rating should take with him a certificate [illegible] signed by the medical officer of his ship or establishment stating that [illegible] and be issued with it on under the conditions laid down in A F O 1838/39 and 2890/40

[illegible] for personal claimed by local purchase should be made by the accountant [illegible] ship or establishment to the commanding officer certifying that the cost is fair [illegible] (*Vide A F O 1838/39 paragraph 7*)

[illegible] type of frames and lenses to be issued is laid down in A F O 1838/39 and White rolled gold frames are issued (A F O 1873/39 paragraph 2) the prescribed lens the equivalent of Class II (gold filled rimmed spectacles) in the S D dockyard pattern and in the National Ophthalmic Treatment Board A rating should in no case pay for this type of spectacle

[illegible] and Class II are as follows —

	With glass	With optical lenses	With one glass and one optical lenses
	11s	17s 6d	14s 9d
White Metal lenses	6 extra		
White [illegible]	9s extra		

[illegible] for Mark III [illegible] 3s per pair and 18s per two pairs [illegible] 6d is allowable for Ophthalmic Surgeon's examination which is [illegible] not included in the above amounts but should be added to the charges given above

[illegible] examination [illegible] other than under NOTE [illegible] arrangements [illegible] of £1 [illegible] allowed

[illegible] specialists [illegible] obtained under National Ophthalmic Treatment Board [illegible] and when [illegible] required should be arranged with the Optical Appliance Depot Acton

[illegible] Where [illegible] lenses purchased in the United Kingdom from a firm on [illegible] under NOTE [illegible] the question of fair and reasonable prices should be referred [illegible] the National Ophthalmic Treatment Board

14. [illegible] are entitled only to exemption and to [illegible] for [illegible] but [illegible] to the supply of glasses at the expense of the [illegible]

15. In case of doubt the question should be referred to the Medical Director General of the Navy [illegible] expenditure is involved.

16. Special [illegible] shipped abroad should approximate to the types described above and the prices [illegible] should be based as a rough guide in judging whether [illegible] reasonable [illegible] having regard to price obtaining locally, nature of exchange, etc.

(A F O s 1924/39, 1331/39, 31/7/39 and 2890/40.)

3301.—Medical Surveys on Officers of Sea Transport Service

(M D G 30396/40.—29 8 1940.)

When a medical report of survey in respect of officers of the Sea Transport Service, Sea Transport [illegible] are to be issued after the substantive rank, e.g.—

Temp. Lt.	R.N.R. (Sea Transport)
Capt. R.N. (retd.)	(Sea Transport)

3341.—Sailors' Pay and Identity Book—Surrender of

(N L. 8950/40.—25 8 1940.)

In any cases where men are discharged from or die in Naval or other hospitals or [illegible] may be discharged direct to the shore from one of H.M. Detention Quarters or [illegible] their Sailors' Pay and Identity Books (Form S.549A) are to be withdrawn by the hospital, detention quarters or prison concerned and other conditions are to be returned to the establishment upon whose books the rating is borne for pay. In the case of men discharged from hospital care should be taken to see that when their Sailors' Pay and Identity Books are surrendered they are signed with Form M.169 which will act as a provisional discharge of identity.

3407.—First Aid Outfits for Aircraft

(M D G 24893/40.—5 9 1940.)

With reference to A F O 2113/40, it was intended that first aid outfits for [illegible] An Arm aircraft should be taken on charge in Airframe Inventories and accounted for in the same way as Appendix [illegible] equipment.

2. The provisions of A F O 1459/39, paragraph 23, and A F O 1073/40, paragraph 9, are to be observed in this respect, with the following amendments:

(a) Commanding Officers of aerodromes are to demand first aid outfits from the Medical Officers of the Naval air stations using Form S.549 (in which the issue and giving the number of the aircraft for which required. Form S.541 is to be marked "For S.125 (R.A.F. Form 464) action").

(b) The Medical Officers are to supply the outfits, vouchering the issue on Form S.541 (triplicate).

(c) Form S.549 are then to be dealt with as follows:—

(i) Original to be forwarded to the Accountant Officer (Sl) who will [illegible] their S.125 (R.A.F. Form 464) action has been taken and return the copy of the voucher for a card.

(ii) Duplicate to be retained by the Commanding Officer of the aerodrome who will take [illegible] action.

(iii) Triplicate to be [illegible] and returned to the Medical Officer who will use it as a supporting voucher to his stores account.

3. The Naval air stations, aircraft centres of H.M. ships responsible for the upkeep of aircraft which are allotted to contractors for modification, repair or overhaul, are responsible for taking [illegible] the first aid outfits which should be returned to the Medical Officer. Similar procedure is to be followed for the return of first aid [illegible] Inventory and bringing them on charge in the store account of the Medical Officer (Form S.549 being used).

4. Outfits for aircraft returned from contractors from repair should be dealt with as for I.E. aircraft.

5. Outfits in aircraft effected in a Naval establishment for repair are to be dealt with in accordance with A F O 241/40, paragraph 3.

6 Commanding Officers of squadrons are responsible for the loss of or damage to first-aid outfits or their contents

7 In order to check any unauthorized opening after issue, these outfits will be bound with a strip of tape passed through the buckle, and the ends of the tape secured by a seal stamped in with a distinctive impression such as the Admiralty weight from the dispensing scales

8 The Medical Officer will be responsible for inspecting these outfits periodically to ensure that they are maintained in a proper condition If any seals are found to be broken or to bear a different impression from the original one, the outfit is to be opened and the contents checked

9 Medical Officers of Naval air stations are to maintain stocks, over and above their maintenance reserve, sufficient to equip new squadrons forming at their stations, on a monthly basis Stations should demand outfits from R N hospitals or medical depôts as under —

Air Station	*Storing Establishment*
Lee on Solent Ford Worthy Down Eastleigh	R N Hospital, Haslar
Yeovilton St Merryn	R N Hospital Plymouth
Abbotsinch Crail Donibristle Hoxton	R N Medical Depôt Ordnance Road Coventry

On the opening of R N Medical Depôt Dunfermline Naval air stations in Scotland should demand on that depôt instead of Coventry

3417 —B R 110—Treatment of Wound Shock—Medical Research Council War Memorandum No 1

(M D G 27500/40 —5 9 1940)

The above described memorandum is to be in the possession of all medical officers The number B R 110 has been allotted to this memorandum Ships and establishments should demand copies from the Naval Store Officer Royal Victoria Yard, Deptford, S E 8

2390 —Spectacles for Reading—Issue to Naval Ratings and Other Ranks, Royal Marines Suffering from Presbyopia

(M D G 18959/40 —1 8 1940)

Glasses for reading may be issued at the cost of Public Funds to men suffering from Presbyopia (who are otherwise medically fit) when the Ophthalmic Specialist certifies that by the use of reading glasses symptoms may be relieved eyesight conserved and invaliding avoided.

2 It is not intended hereby to give authority for the unrestricted wearing of glasses on duty

3 This order applies to ratings of all branches, and other ranks of the Royal Marines

4 The supply of glasses is governed by A F O 1838/39

(A F O 1838/39)

2246 —Hurt Certificate—New Form of

(P M 1089/39 —20 6 1940)

In connection with the revised procedure for the issue of Hurt Certificates, promulgated King's Regulations Amendments 2/40 a new form of Hurt Certificate (M 103) has been introduced which provides not only for the award of the Hurt Certificate on the reverse side of the form, but also on the front for a report by the Medical Officer to the Captain prior to the award and if a Hurt Certificate is not granted for a report to this effect The layout of the new Form is as shown below —

Front of Form

REPORT OF WOUND OR HURT

Name (in full) (Rank or Rating) (Official Number)

belonging to His Majesty's Ship

received the following* on 19

Age about years Born at or near

Height ft. ins Hair Eyes

Complexion

Particular Marks or Scars

Date 19 Signature of Medical Officer

To be completed if Hurt Certificate (overleaf) is **NOT** awarded

I/We, having enquired into the circumstances in which the above named* sustained the † stated, and having heard the evidence of (Insert Name and Rank or Rating) who witnessed the accident consider that he was Not at the time on His Majesty's Service

‡Signatures and Ranks of Investigating Officers

Signature of Officer or man injured

Date 19

Signature of Captain
H M S

Officer or Man Injured or Wounded

Injury or Wound

‡ Delete when case is investigated by Captain

Reverse Side of Form

CERTIFICATE FOR WOUNDS AND HURTS

THESE ARE TO CERTIFY the Right Honourable the Lords Commissioners of the Admiralty that (Name in full) (Rank or Rating) (Official Number) belonging to His Majesty's Ship was* on 19 as shown on the reverse hereof and that I/we having enquired into the circumstances in which he received the † stated and having heard the evidence of (Insert Name and Rank or Rating) who witnessed the accident considered that he was then actually on His Majesty's Service in

Injured or Wounded.

Injury or Wound.

Here describe the further duty which the injury was received and also the particular act of duty or form of physical exertion in which he was incurred as required by Article 1424 of King's Regulations.

† Delete when case is investigated by Captain

†Signatures and Ranks of Investigating Officers

Signature of Officer or Man injured

Date 19

Signature of Captain
H M S

Note.—The grant of a Hurt Certificate to a Petty Officer or man is to be noted on his Service Certificate

Present stocks of form M 103 should be utilised as [illegible] at the Form being [illegible] as necessary and the blank [illegible] being [illegible] for the reports referred to above

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HONOURS

ROYAL NAVY

Surgeon Rear Admiral Sheldon F Dudley O B E M D, F R C P Lond D P H, D T M K H P, to be Commander of the Order of the Bath (C B) on the occasion of His Majesty's Birthday

D S O

Surgeon Lieutenant John Jordan M B B Ch R N, H M S *Bideford* for services in Daaktik

O B E

Surgeon Commander Douglas Murdo Beaton, R N H M S *Warspite* in be an ddit and O B E (Military Division) for skill and devotion to duty in the Second Battle of Narvik

M B E

Commissioned Warrant Gunner L F Gibbons, D S M to be Member of the Order of the British Empire (M B E) on the occasion of His Majesty's Birthday

Mentioned in Despatches

Surgeon Captain A R Fisher R N (Ret)

Surgeon Commander W G C Fitzpatrick R N

Surgeon Commander G L Ritchie M C M B Ch B R N during August, 1940, for untiring devotion to duty in attending to casualties after having himself been rescued

Surgeon Lieutenant Noel Louis Fox R N H M S *Morgate*

The King has been pleased to grant permission for the undermentioned officers to wear without restriction the Decorations shown awarded by the French Government, before the Franco German armistice, for their good services to the victims of a Japanese bombing raid on the Yunnan Railway in February 1940 —

To be Officer of the Order of the Dragon of Annam

Surgeon Lieutenant W H G M Hamilton M B, B Ch, M R C S L R C P R N

To be Officer of the Order of Cambodia

Surgeon Lieutenant J D C Gewans M B B Ch R N

R N V R

D S C

Bar to D S C —Surgeon Lieutenant Joseph W Shield R N V R H M S *Grafton*

Lieutenant Surgeon Lieutenant D W Pugh, R N V R H M S *Blackshed*

Surgeon Lieutenant Andrew George Hegarty, R N V R H M S *Fame*

Lieutenant Surgeon Lieutenant Gordon Hepburn Swapp R N V R H M S *Sycamore*, [illegible] and efficient services in minesweeping operations in Norwegian waters

Surgeon Lieutenant Robert Andrew Duval R N V R H M S *Eskimo* for daring [illegible] and devotion to duty in the Second Battle of Narvik

Mentioned in Despatches

Surgeon Lieutenant Percy A Shutte R N V R H M S *Windsor*

Surgeon Lieutenant F Whitwell R N V R H M S *Worcester*

Surgeon Lieutenant James C Brewer R N V R, H M S *Whitehall*

Surgeon Lieutenant Ensby Elines R N V R for courage and devotion to duty during the withdrawals from Boulogne and Calais

Surgeon Lieutenant D M Leeming R N V R H M S *Westminster* for courage and [illegible] duty during the withdrawals from Boulogne and Calais

Surgeon Lieutenant William Albert Bruce Cooper R N V R H M S *Versatile* for [illegible] and devotion to duty on the Dutch Coast

Surgeon Lieutenant Godfrey Fraser Carey R N V R

Surgeon Lieutenant George A Hort, R N V R

OBITUARIES

We regret to report the following deaths since our last issue and extend our deep sympathy to the relatives.

TEMPORARY SURGEON REAR ADMIRAL ERIC L. PEARCE GOULD, M.Ch., F.R.C.S. Surgeon Rear Admiral Pearce Gould's connection with the Royal Navy extends over two wars. He served as a Temporary Surgeon Lieutenant, R.N., between 1914 and 1918 being chiefly associated with the Surgical Division of R.N. Hospital Haslar and R.N. Hospital, Gibraltar. He was educated at Charterhouse and Christ Church, Oxford, where he took first class honours in natural sciences. He became an M.Ch. in 1915 and took his M.B. in 1918. From 1925 to 1929 he was Dean of the Medical School of the Middlesex Hospital and at the outbreak of the present war he was Senior Surgeon on the honorary staff of that hospital. Like his distinguished father before him, Pearce Gould was a great clinical teacher and a man with the highest sense of duty. He held strong convictions from which he was not easily deflected. His personality was infectious and he left his mark upon the standard of practice to be expected from those who had the honour of being his clerks and dressers. His contributions to surgery were numerous and he was the Editor of the *Transactions of the Medical Society of London*. He received his fellowship in classic on Surgical Diagnosis. He wrote Surgical Pathology and articles on Tuberculosis of the Lymphatic Glands.

During the present war the Surgeon Rear Admiral was stationed at R.N. Hospital, Plymouth, in a consulting capacity. His death while on active service is not only a loss to surgery but equally a loss to the medical branch of the Royal Navy. Writing in the *British Medical Journal* for August 10, 1940, Surgeon Rear Admiral Gordon Taylor, also of the Middlesex Hospital, makes the following appreciation:—

"The untimely death of Eric Pearce Gould will come as a shock to his many friends and the blow will be felt by no more than one generation of Middlesex Hospital men to whom he was held in great esteem. He was widely known outside the walls of his own hospital.

"The name of Pearce Gould has been intimately associated with Middlesex Hospital for nearly two thirds of a century. The son, recently dead, the father as surgeon to the Middlesex and by a coincidental fortune occupied the same wards and lecture room had the advantage of the sunny and loyal appreciation of the rising surgeon. Throughout his surgical career Eric Gould suffered from the gravest disadvantage of severe asthma and the nocturnal aggravations of this distressing affliction invariably necessitated injection of adrenaline in the night watches. Yet this never appeared to impede, no doubt upon his throat and, men marvelled that he could sleep short and almost unfailing regularity the full work inseparable from the life of a busy hospital surgeon. His surgical interests were catholic in their scope and much of his time was free from the operative treatment of malignant hypertrophy in women to the abandonment for the cure of which he had poured on astringent off in his last illness in plaintive. He performed a gastrectomy with the rare zeal as he approached a Sudan elephantiasis or the sympathetic chain. His hernia operations was characterized by its meticulous attention to detail and free. The Rockefeller Travelling Scholarship gave him opportunities for practical instruction of surgery in America and of tropical medicine in Britain. On his return from America he was appointed into the Middlesex the pioneer of the practice of modern proctology in the region which he had made his own. Certain of his contributions from the Indian Medical Service, and the great teachers of all time, the gift of imparting knowledge. The chief material possessed of the son, the dedicated finger, the mental inter-tension fixed in the attention. From the personal side Eric Pearce Gould left his inheritance, the personal gift of the born teacher of the first medical speakers of his day. The present discourse was delivered in Brighton, into but he was also quick in debate and clever at repartee. To all matters he brought a mind of a passion for correct and proved an indefatigable and capable director of the medical school.

He was bright, Good speech, and he delighted in it, and was wont to provoke or reason. He was specially proud of his association with the Royal Navy. Earlier he was consulting surgeon to the Service for the war. His younger brother, who was killed in France in 1918, had served in the Navy in the last war and now he shared his brother's death prematurely in the mind of Europe in imagination, and the Middlesex will the poorer for the loss of Eric Pearce."

SURGEON COMMANDER CHARLES HERBERT EVANS, M.R.C.S., L.R.C.P., R.N., had served for over twelve years in the Navy and on his retirement Surgeon Commander was appointed as Senior Medical Officer of the Royal Naval Hospital, H.M.S. *Glorious*. He was a native of Port Elizabeth, South Africa. His early service was spent in the Mediterranean and later in *Dublin* in the Red Sea. Later he served in the cruisers *Cardiff* and *Carlisle* and later he was on the South African Station. The cruiser he served in was *Bee*, flagship of the Rear Admiral

in the Yangtze River. In May 1938, he was appointed to H.M.S. *Hermes* training carrier for probationary officers of the Fleet Air Arm. He was promoted to Surgeon Commander in April of the present year. Egan went down with his ship which was torpedoed in the Arctic on June 9 shortly after he had assumed medical charge of this important unit.

Surgeon Lieutenant Commander Hugh A. Lockhart, R.N.V.R., graduated at the University of Durham in 1932. He is presumed to have been killed in action in H.M.S. *Glorious* when that ship was sunk on June 9, 1940.

Surgeon Lieutenant Terence Arthur M. Maunsell, R.N., was reported missing after the foundering of H.M.S. *Glorious* in June, 1940.

Surgeon Lieutenant (D) Gordon Passmore Pearce, L.D.S., R.N., was lost at sea in H.M.S. *Glorious* when that ship was sunk in action on June 9, 1940.

Surgeon Captain Edward J. Biggs, R.N. (Ret.) died at the age of 81 at Bromley, Kent. He retired from the Service in 1930. Educated at Charing Cross Hospital, he entered the Royal Navy in 1881. He became a Fleet Surgeon in 1897 and was retired with the rank of Surgeon Captain in 1918. He was Staff Surgeon in H.M.S. *Scout* during the Dongola Campaign in 1896 for which services he received the Egyptian Medal and Khedive's Bronze Star, and he was Staff Surgeon in *Orlando* in 1900 in Admiral Seymour's Command when the International Relief Column proceeded to Peking. He originally retired from the Active List in 1906 but was recalled for the Great War, retiring finally in 1918.

Surgeon Captain Robert Forbes Bowie, C.B., R.N. (Ret.) was born in 1860 and educated at University College Hospital, taking the Conjoint qualification in 1885. He entered the Royal Navy almost at once, and became a Fleet Surgeon in 1901 and Deputy Inspector General in 1905. He was landed with the Naval Party in Samoa in 1899 and was mentioned in despatches for his services in that expedition. He was also landed with the Naval Brigade in the South African War. He served throughout the Great War from 1914 to 1918. He was present at the Battle of Jutland and was mentioned in despatches and subsequently honoured with the C.B. Surgeon Captain Bowie died at Aberlady on August 10, 1940, aged 79.

Surgeon Lieutenant Robert A. B. Thrane, R.N., was reported on "missing believed killed" in a list published by the Admiralty on July 25. He was a graduate of Cambridge and studied medicine at the Westminster Hospital, taking the Conjoint qualification in 1934. He was a native of Grantham and was on the emergency list of Surgeon Lieutenants, R.N. He was serving in H.M.S. *Keith* which foundered on June 1, 1940.

Staff Surgeon Bernard Ley, R.N. (Ret.) was educated at St. Bartholomew's Hospital and took the Conjoint qualification in 1899. After various civil appointments in gynaecological and children's hospitals he entered the Royal Navy during which time he distinguished himself by gaining the Gilbert Blanc Gold Medal in 1904. He retired shortly afterwards and took up practice in London. He died at Chilbolton, Hampshire, on July 16, 1940.

Temporary Surgeon Lieutenant A. F. B. Watts, D.S.C., R.N.V.R., who was recently decorated for his services in H.M.S. *Hardy* in the first Battle of Narvik is now reported as "missing".

In the casualty list published on September 18, 1940, the Admiralty mentioned the names of Probationary Temporary Surgeon Lieutenant Edward I. Smith, R.N.V.R., and Temporary Surgeon Lieutenant Hamish A. Wallace, R.N.V.R., both reported as "missing" and presumed killed. Smith was a graduate of Glasgow University. He took his degree in 1934. Dr. Wallace was educated at Gonville and Caius College, Cambridge, and University College Hospital, London. He took the Conjoint qualification in 1934 and the Cambridge M.B. in 1937. He obtained first class honours in the Natural Sciences Tripos. Before entering the Service he had been House Surgeon at the Royal West Sussex Hospital, Chichester, and had subsequently settled in London where he became Medical Correspondent of the *Daily Mail*.

In the [illegible] appear the names of Temporary Surgeon Lieutenant JAMES F. NEWMAN, R.N.V.R. [illegible] Surgeon Lieutenant ARTHUR CHARLES SHELFORD, R.N.V.R.

SURGEON REAR ADMIRAL JAMES ABERCROMBIE DALTON, C.M.G. (Ret.), was educated at St. Bartholomew's Hospital, and qualified in 1891. In his early days in the Service he served in the *Surprise* in the Mediterranean and then at R.N. Hospital, Malta. He was specially promoted for his work on undulant fever. In 1909 he was in the old hospital ship *Maine* and thereafter he served in the hospital ship *Rena*, and in H.M.S. *Royal Sovereign*. His last hospital charge was that of Hong Kong after which he retired with the rank of Surgeon Rear Admiral. Surgeon Rear Admiral W. W. Kerr writes the following appreciation:—

"Freddie Dalton was one of those who, impatient of discipline, are the leaven of a disciplined Service. Headstrong, quick tempered and loyal and not one to suffer a fool gladly, he vitalized the routine of ship or hospital or office. Of his great qualities he gave freely to the Service and to those who sought his help. His faults were those of his temperament—a tendency to judge hastily and a love of a fight for its own sake.

"Those who served him were sure of generous support and recognition though their comings were mercilessly detected and exposed. He was one of three personalities who stand out in the Naval Medical history of the past half-century. In some Valhalla where warriors recall their deeds, we may picture a meeting in an atmosphere of good living and controversy and achievement of the forms of Foster, Dalton and Mann."

SURGEON COMMANDER ARMIN GASCOIGNE VAVASOUR ELGER, D.S.C., V.D., R.N.V.R., qualified from the London Hospital in 1904. Throughout his connection with the R.N.V.R. he took a very active interest in Service matters, and two articles from his pen appeared in the JOURNAL OF THE ROYAL NAVAL MEDICAL SERVICE in 1910. They were the "Ship's Surgeon's Handbook" and "Notes on Hospital Ships and their Functions." He became a prominent personality in hospital ships during the Great War, and even after his retirement kept up his connection with the Service, and sometimes contributed notes of interest to the JOURNAL. He died on June 14, 1940.

RETIREMENTS, ETC.

Surgeon Captain J. Martin (Retired) appointment terminated and reverted to retired list (medically unfit), June 25, 1940.

Surgeon Captain (Retired) A. S. Paterson, M.B., Ch.B., appointment terminated and reverted to retired list, August 1, 1940.

Surgeon Captain G. E. Scott, D.S.O., M.R.C.S., L.R.C.P., appointment terminated and reverted to retired list (medically unfit), June 4, 1940.

PROMOTIONS

Surgeon Commander O. D. Brownhelt, O.B.E., M.B., granted Acting rank of Surgeon Captain (whilst holding present appointment).

Surgeon Commander F. G. Hatch, O.B.E., M.B., granted Acting rank of Surgeon Captain (whilst holding present appointment), July 1, 1940.

Surgeon Lieutenant-Commander F. G. V. Scovell, M.R.C.S., L.R.C.P., to be Surgeon Commander, July 19, 1940.

Surgeon Lieutenant Commander J. J. Benson, L.R.C.P. & S., to be Surgeon Commander, July 19, 1940.

Surgeon Lieutenant Commanders C. H. Bart, M.R.C.S., L.R.C.P., D.P.H., and A. J. Burden, M.D., B.Ch., to be Surgeon Commanders, August 17, 1940.

Surgeon Lieutenant Commander S. J. Savage, M.B., B.Ch., to be Surgeon Commander, September 9, 1940.

Surgeon Lieutenant-Commander (D) W. E. L. Brigham, L.D.S., granted Acting rank of Surgeon Commander (D) whilst holding present appointment, May 15, 1940.

Surgeon Lieutenant Commander (D) L. R. Armstrong, L.D.S., granted Acting rank of Surgeon Commander (D), August 1, 1940.

Surgeon Lieutenant Commander (D) J. L. Lenn, L.D.S., granted Acting rank of Surgeon Commander (D), June 22, 1940.

Surgeon Lieutenant-Commander (D) J. M. Park, L.D.S. granted Acting rank of Surgeon Commander (D) January 1, 1940.

Surgeon Lieutenant-Commander (D) A. W. Wallace, L.D.S. granted Acting rank of Surgeon Commander (D) January 21, 1940.

Surgeon Lieutenant-Commander L. M. Hughes, L.D.S., granted Acting rank of Surgeon Commander (D) May 24, 1940.

Surgeon Lieutenant-Commander (D) F. R. Longhurst, L.D.S., granted Acting rank of Surgeon Commander (D) January 1, 1940.

Surgeon Lieutenant-Commander H. N. V. Barnes, L.D.S. granted Acting rank of Surgeon Commander (D) May 27, 1940.

Surgeon Lieutenant-Commander (D) O. J. Bertrable, L.D.S. granted Acting rank of Surgeon Commander (D) June 17, 1940.

Surgeon Lieutenant-Commander (D) D. L. Simpson, L.D.S. granted Acting rank of Surgeon Commander (D) January 1, 1940.

Surgeon Lieutenant-Commander (D) W. C. G. Ford, L.D.S. granted Acting rank of Surgeon Commander (D) April 1, 1940.

Surgeon Lieutenant-Commander (D) W. Holgate, L.D.S. granted Acting rank of Surgeon Commander (D) August 9, 1940.

Surgeon Lieutenant-Commander (D) S. Mawer, L.D.S. granted Acting rank of Surgeon Commander (D) August 12, 1940.

Surgeon Lieutenant (Engineer) S. J. Von Fuhr, M.B., to be Surgeon Lieutenant-Commander (Engineer) July 5, 1940.

Surgeon Lieutenant D. A. Hovenden, M.R.C.S., L.R.C.P., to be Surgeon Lieutenant-Commander, August 1, 1940.

Surgeon Lieutenant E. B. Bradbury, M.B., F.Ch., to be Surgeon Lieutenant-Commander, August 1, 1940.

Surgeon Lieutenant (Engineer) D. Fwart, M.B., to be Surgeon Lieutenant-Commander (Engineer), August 1, 1940.

Surgeon Lieutenant (D) R. S. Jenkins, L.D.S., to be Surgeon Lieutenant-Commander (D), May 19, 1940.

Surgeon Lieutenant (D) E. I. Evans, L.D.S., to be Surgeon Lieutenant-Commander (D), September 12, 1940.

WARDMASTERS

Commissioned Warrant Officer F. Gibbons, D.S.M., M.B.E., to be Wardmaster Lieutenant, August 28, 1940.

Warrant Wardmaster F. D. Lewis to be Commissioned Wardmaster, August 21, 1940.

Wardmaster Lieutenant J. Gunn placed on the retired list (on account of age regulation), August 14, 1940 (to remain in present appointment).

ROYAL NAVAL VOLUNTEER RESERVE

RETIREMENTS AND RESIGNATIONS

Surgeon Commander (D) C. A. O. White, appointment and commission terminated (medically unfit), May 9, 1940.

Surgeon Lieutenant-Commander M. P. Rudbington, appointment and commission terminated (medically unfit), April 4, 1940.

Temporary Surgeon Lieutenant-Commander R. C. H. Enser, L.M.S.S.A., appointment and temporary commission terminated, May 21, 1940.

Acting Surgeon Lieutenant-Commander A. E. Concanjon, appointment and commission terminated (medically unfit), June 8, 1940.

Surgeon Lieutenant L. F. Dunnan, M.R.C.P., appointment and commission terminated, June 17, 1940.

Temporary Surgeon Lieutenant-Commander A. M. Gilchrist, M.B., Ch.B., appointment and commission terminated, July 9, 1940.

Temporary Surgeon Lieutenant-Commander A. E. Burns, M.B., Ch.B., appointment and commission terminated, July 8, 1940.

Temporary Surgeon Lieutenant R. W. Nonnelley, M.B., Ch.B., appointment and commission terminated, June 17, 1940.

Probationary Temporary Surgeon Lieutenant [illegible] R[illegible] FRCS[illegible] commission terminated (medically unfit) June 14 1940

Temporary Surgeon Lieutenant R W S[illegible] RM [illegible] commission terminated July 26 1940

INDIA

Mr L C Rogers FRCS granted [illegible]

PROMOTIONS

Surgeon Lieutenant D B H Dowse MB Ch[illegible] Lieutenant Commander (while holding present appointment)

Surgeon Lieutenant A Raffman MB [illegible] Commander (while holding present appointment)

Surgeon Lieutenant R F B Barnett MVSNA [illegible] Lieutenant Commander (while holding present appointment)

Probationary Temporary Surgeon Lieutenant P [illegible] MRCS LRCP granted Acting rank of Temporary Surgeon Lieutenant Commander (while holding present appointment) May 18 1940

Temporary Surgeon Lieutenant R L Knight MRCS LRCP granted Acting rank of Temporary Surgeon Lieutenant Commander (while holding present appointment) February 7 1940

Temporary Surgeon Lieutenant The Hon A G Catherine Hardy MB ChB granted Acting rank of Temporary Surgeon Lieutenant Commander (while holding present appointment) July 10 1940

Surgeon Lieutenant H C Ross MRCS LRCP to be Surgeon Lieutenant Commander June 1 1940

Surgeon Lieutenant H R Vickers MB ChB to be Surgeon Lieutenant Commander June 29 1940

Surgeon Lieutenant Commanders W F Lascelles MB [illegible] Pugsley MB MRCS LRCP K L Stoffel MB H F Widdup MB ChB L D Nelson MB A H Shelswell MRCS LRCP A L Cohen MD FRCS R H Enoch MRCS LRCP and H L Hoffmann MB BCh MRCP granted Acting rank of Surgeon Commander June 30 1940

Surgeon Lieutenant N A Vernon MRCS LRCP E J S Woolley MRCS & P F A Mage MB BCh FRCS H G Wade MD MRCP D R Maitland MB ChB MRCP H B Howell MRCS LRCP J A Shepherd MD FRCS J L M Wood MRCS LRCP DPH F C Budds MB FRCS O J Vaughan Jackson BM BCh FRCS LRCP T H Furci MB BCh MRCS LRCP DPH and G L Foss MD granted Acting rank of Surgeon Lieutenant Commander June 30 1940

Surgeon Lieutenants E S Bolton MB FRCS, LRCP E Y Feeles MB MRCS LRCP I P Symes MB E R Wells MRCS LRCP T C Wells MRCS LRCP C H Fox FRCS LRCP W B D Mills MB C d W Kneen MRCS LRCP J D J Freeman MRCS, LRCP and R C T Pearson MRCS LRCP granted Acting rank of Surgeon Lieutenant Commander July 1 1940

Probationary Temporary Surgeon Lieutenant H O Paton MB ChB granted Acting rank of Temporary Surgeon Lieutenant Commander (while holding present appointment), July 6 1940

Probationary Temporary Surgeon Lieutenant K Cameron MB ChB granted Acting rank of Temporary Surgeon Lieutenant Commander July 25 1940

Surgeon Lieutenant R I Bajee BM granted Acting rank of Surgeon Lieutenant Commander (while serving as Squadron MO) May 3 1940

Temporary Surgeon Lieutenant D Ross MB granted Acting rank of Temporary Surgeon Lieutenant Commander, July 8 1940

Surgeon Lieutenant S L Clarke MB granted Acting rank of Surgeon Lieutenant Commander (while holding present appointment) July 10 1940

Temporary Surgeon Lieutenant S L Lind MB granted Acting rank of Temporary Surgeon Lieutenant Commander July 13 1940

Probationary Temporary Surgeon Lieutenant C A Kilpatrick granted Acting rank of Temporary Surgeon Lieutenant Commander (while holding present appointment) May 31 1940

Temporary Surgeon Lieutenant W C Sloan, MD granted Acting rank of Temporary Surgeon Lieutenant Commander July 13 1940

Probationary Temporary Surgeon Lieutenant R W Tipple MB granted Acting rank of Temporary Surgeon Lieutenant Commander (while holding present appointment May 31 1940

Probationary Surgeon Lieutenant K P Pallet, M R C S, L R C P, confirmed in rank June 21, 1939

Probationary Temporary Surgeon Lieutenant D G Walker M B Ch B confirmed in rank, February 5, 1940

Probationary Surgeon Lieutenant A G Reid, M B Ch B confirmed in rank February 9, 1940

Probationary Surgeon Lieutenant A. A Robertson, M.D, confirmed in rank, January 29 1940

Probationary Surgeon Lieutenant R S Turner, M R C S, L R C P, confirmed in rank January 2 1940

Surgeon Lieutenant (D) J Beeyan, L D S, to be Surgeon Lieutenant-Commander (D) May 16, 1940

Surgeon Lieutenant (D) A C Fullin, L D S, to be Surgeon Lieutenant Commander (D), July 11, 1940

Probationary Surgeon Lieutenant J T Morton M R C S L R C P confirmed in rank June 5, 1939

Probationary Surgeon Lieutenant J R Forbes M D, confirmed in rank March 20, 1940

Probationary Surgeon Lieutenant G M Whitteridge M R C S L R C P L D S confirmed in rank March 27 1939.

Probationary Temporary Surgeon Lieutenant R Down, M B confirmed in rank, March 12 1940

Probationary Temporary Surgeon Lieutenant M Walters M B confirmed in rank March 5 1940

Surgeon Lieutenant-Commander (D) H P Buchanan L D S granted Acting rank of Surgeon Commander (D) January 1 1940.

Surgeon Lieutenant Commander (D) F E D Hallon M R C S L R C P L D S granted Acting rank of Surgeon Commander (D), January 1, 1940

Temporary Surgeon Lieutenant H D Favine D M B Ch D P H granted Acting rank of Temporary Surgeon Lieutenant-Commander July 24 1940

Probationary Temporary Surgeon Lieutenant J Gray confirmed in rank with original seniority of February 5 1940

Surgeon Lieutenant C A. St.C Haley M R C S, L R C P, granted rank of Acting Surgeon Lieutenant Commander (while holding present appointment), June 20 1940

Probationary Temporary Surgeon Lieutenant R H Roberts confirmed in rank January 2 1940

QUEEN ALEXANDRA'S ROYAL NAVAL NURSING SERVICE

HONOURS

Miss A Ralph, Matron in Chief, Queen Alexandra's Royal Naval Nursing Service, R N Hospital, Haslar awarded the Royal Red Cross (R R C)

Miss L Phillips Matron Queen Alexandra's Royal Naval Nursing Service, awarded the Royal Red Cross (R R C)

Miss E Campbell Matron Queen Alexandra's Royal Naval Nursing Service, awarded the Royal Red Cross (2nd class) (A R R C)

Nursing Sister Miss E Hoyn (Retired), re-employed as Acting Superintending Sister July 24 1940

Miss F M deE Jordan, A R R C, Superintending Sister (Retired) re employed as Nursing Sister June 12 1940

RESIGNATION

Miss L K Penhard Nursing Sister resigned July 8, 1940

Preparations.

"METHEDRINE"

METHEDRINE (β-methylhsomyn) the issue of which [illegible] announced by Burroughs Wellcome & Co Snow Hill Buildings, E.C 1 is a [illegible] discovered synthetic compound belonging to the sympathomimetic amine group Given orally, it produces a prolonged rise of blood-pressure and stimulation of the central nervous system especially of the cerebral cortex. Methedrine" is particularly indicated in the treatment of narcolepsy, it may also be of value in certain depressive psychopathic conditions, as an analeptic in barbiturate poisoning and as an antispasmodic in the X-ray visualization of the gastro intestinal tract

The compound is issued for oral administration as Tabloid Methedrine Hydrochloride, 0 002 gramme in bottles of 25 and 100

"TABLOID" PHENOBARBITONE AND BROMIDE

THE simultaneous administration of potassium bromide and phenobarbitone is a valuable therapeutic measure in the treatment of nervous diarrhœa and other types of gastro intestinal dysfunction in which sedative and antispasmodic medication is indicated These medicaments are effectively and conveniently combined in Tabloid Phenobarbitone and Bromide a recent addition to the range of products issued by Burroughs Wellcome & Co Snow Hill Buildings E.C 1 Other conditions in which it may be prescribed include epilepsy and allied disorders involving hyperexcitability of the motor cortex delirium tremens nervous insomnia and thyrotoxicosis The product presents Soluble Phenobarbitone gr ½ with potassium bromide, gr 7, and is issued in bottles of 25 and 100

INDEX

Notice.

The [illegible] Medical Officers to [illegible] Papers on professional subjects [illegible] personal experiences [illegible] items of news and matters of interest to the Naval Medical Service will be welcomed from ships and establishments on home and foreign stations.

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